

~~ANNUAL REPORT~~

OF

MEDICAL DEPARTMENT ACTIVITIES

OF THE

MEDICAL SECTION, HEADQUARTERS SEVENTH ARMY

FOR THE YEAR 1944

HEADQUARTERS SEVENTH ARMY
Office of the Surgeon
APO 758 US ARMY

MPR/wsb

SUBJECT: Annual Report of Medical Department Activities. 1944

TO : The Surgeon General, US Army.
(THRU: Chief Surgeon, ETOUSA, APO 887, US Army)

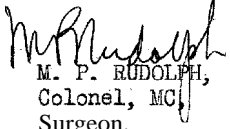
1. In accordance with the provisions of AR 40-1005, as mended, and Circular Letter Number 143, Office of the Chief Surgeon, ETOUSA, 1943, the inclosed Annual Report of Medical Department Activities of the Medical Section, Headquarters Seventh Army for the year 1944, is hereby submitted.

2. The Report has been divided into three main parts:

The Planning Stages for the Southern France Campaign

The Subsequent Operations in France

A Discussion of the Salient Aspects of Seventh Army Medical Service


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PLANNING STAGES
OPERATION "DRAGON"

At the beginning of 1944, Seventh Army Headquarters was located in Palermo, Sicily. Preparations were being made to move certain key personnel of each staff section to North Africa to work on planning stages of amphibious and land operations in France.

at that time, personnel of the Medical Section consisted of ten (10) officers and eighteen (18) enlisted men. The officers and enlisted men who were to assist in the planning were set up in two groups; one group, the Surgeon, Executive officer, Hospitalization and Evacuation Officer, and the Administrative Officer, with five (5) enlisted men, made up the tactical planning section, which was set up in Algiers, North Africa, and worked in conjunction with Allied Force Headquarters and NATOUSA. The other group, consisting of the Medical Supply Officer, Dental Officer, and six (6) enlisted men, moved to Oran, North Africa with other supply divisions of Seventh Army Headquarters, to work out supply plans with SOS NATOUSA, and various Base Sections. Upon arrival in North Africa, the planning groups were designated as Force 163, and were in no way identified with Seventh Army. For security purposes, all personnel were unofficially absorbed by AFHQ and SOS NATOUSA.

The remainder of the Medical Section personnel were left with Seventh Army Headquarters (Main) in Palermo, Sicily, to coordinate medical activities of the few troops which were still assigned to Seventh Army. This group later moved to Mostaganem, North Africa on 23 May 1944, and continued to function separately from Force 163. The entire Headquarters was not consolidated until July 1944, when a move was made from Africa to Naples, Italy.

Throughout the planning stages, during the period January to the middle of August, many revisions in the over-all plan of the operation occurred, and of necessity this required constant changing of medical plans. The medical plans as discussed in this report were made when the over-all plans became firm.

In the first part of May a Beach Control Group Headquarters was formed from members of the various supply services of Headquarters Force 163. The medical section of this unit consisted of three (3) officers and three (3) enlisted men. This personnel, working under the direction of the Army Surgeon, was to direct the unloading of hospitals over the beaches, evacuate casualties, and control the flow of medical supplies from ships to dumps, until the Army and Base Section were in suitable position to assume those duties.

General Mission of the Task Forces: To establish a beach-head east of Toulon as a base for the assault and capture of Toulon. Thereafter, to capture Marseilles and exploit toward Lyon, Vichy---and ultimately, the Rhine River.

EVACUATION.

As this was to be a combined Army-Navy operation, there were certain responsibilities that had to be assumed by each of the services in order that evacuation of sick and wounded personnel could be carried out in the most efficient manner. In this respect the U.S. Navy was held responsible for:

1. Medical care of personnel of all services while embarked in U.S. Navy ships or while under treatment in U.S. Naval shore-based medical units.
2. Seaward evacuation of all casualties from the assault area until the U.S. Army became sufficiently established ashore to treat, hold, and evacuate in accordance with routine Army plans.
3. Keeping casualty evacuation records.
4. Prompt delivery and exchange of medical supplies with beach medical units.

The U.S. Army was responsible for:

1. The medical care of personnel of all services:
 - a. Landward from the high water mark.
 - b. In U.S. Army controlled Hospital Ships.
 - c. In all U.S. Army shore based medical units.
2. Maintaining liaison with Medical Sections of Navy Beach Battalions to expedite transmission of casualty evacuation data and to facilitate keeping evacuation records.
3. Maintaining medical supply dumps at ports and hards where casualties will be disembarked.
4. Unloading of casualties at disembarkation ports and hards.
5. Notifying British and French authorities concerned when British and French casualties are listed in the evacuation reports from evacuation ships.

In considering the responsibilities of the Navy, it was

necessary for the Army Evacuation Officer to determine the feasibility of using certain types of craft available. In coordinating plans with the Navy, it was decided that the most suitable ships for evacuation purposes, other than hospital ships, were APA's, XAPAs, and LST's. These ships were to be used only in case of emergency even though they were moderately well-equipped to handle patients. As it was not expected to have port facilities available in the early stages of the landing operations, methods for transporting patients from the shore to the evacuation ships had to be considered. Plans were made to use LCT's and DUKW's as water ambulances, but it was found that DUKW's would not be satisfactory, as hospital ships were not equipped with the gear necessary to hoist them to the sally port so that the patients could be unloaded. Another disadvantage was, that in the event of rough weather, it would be too dangerous for the welfare of the patient.

Navy personnel who were to be responsible for keeping casualty evacuation records were made familiar with the type of information that was desired by the Army. Names, serial numbers, and organizations of patients being evacuated, were to be listed and turned in to the Commanding Officer, Detachment of Patients, Adjutant General's Section, Headquarters Seventh Army. Plans were also made to notify the Detachment of Patients in case any ship transporting patients was lost.

Preparations were made to furnish the Navy with the necessary items of supply, such as blankets and litters, to effect property exchange at the evacuation points.

In view of the expected numbers of casualties to be evacuated in the early phases of operations and the limited bed space that would be available, it was decided to evacuate all patients except those that could not be moved due to severity of wounds. There was to be no sorting of patients according to nationality, i.e.; American, British, and French were all to be evacuated to Naples, Italy until D + 7. Commencing on D + 7 the French were to be sent to Oran, Africa, and all others to Naples, including POW's. This plan was to continue in force until suitable hospital facilities would be available in France.

The changes in plans for the operation necessitated many revisions in estimated requirements for the number of hospital ships that would be needed. When the final plans were drawn up twelve (12) hospital ships were allotted. These were to be under control of AFHQ, moving as requested by the Army Surgeon.

The plan for movement of the Hospital Ships to France was as follows:

The vessels were to operate out of a pool at Corsica, evacuate patients to the Zone of Communications (Italy or Africa) and return to Corsica to wait for further orders. Two (2) ships were to be in the Target Area at dawn of D + 1, and thereafter, to arrive in the area on automatic schedule of one (1) ship each day until D + 10. After D + 10 the ships were to be called for by the Army Commander as they were needed.

Loading of the hospital ships in the Target Area was to be completed before sunset. In the event they were not loaded to seventy-five (75) percent capacity at that time the ships were to be taken out of the area and returned at dawn of the next day to complete loading.

Preparations were made for air evacuation, which was planned to begin about D + 7, as it was not contemplated that a suitable airfield would be secured before that time. In order that enough planes would be available to handle patients a request was submitted to MATAF to allot the Army a total of seventy (70) aircraft for this purpose. Tentative plans were made for one of the Medical Clearing Companies to act as an air holding unit at the airfield. As this unit would have to be formed from one of the Clearing Companies of the Medical Battalions assigned to Army, it was necessary to wait until the operation began in order to determine which company could be spared.

The Army Rail Transportation Section was contacted regarding facilities which could be made available to make up a hospital train. Arrangements were made whereby the Medical Department would provide medical personnel and equipment, and Rail Transportation would furnish rolling stock, make the necessary alterations, and operate the train. It was assumed that trains captured in France could be utilized for this purpose.

Until such time as train service could be started, all overland evacuation would be by motor ambulance, augmented by other suitable military vehicles if the need arose.

As the final plans became firm, the Medical Battalions (Sep) and attached Clearing and Collecting Companies necessary to support the three divisions engaged in the assault, were attached to their respective divisions for final training and participation in the operation.

The set-up of each Medical Battalion was as follows:

<u>ALPHA BEACH (3rd Div)</u>	<u>DELTA BEACH (45th Div)</u>	<u>CAMEL BEACH (36th Div)</u>
Hq & Hq Det 52d Med Bn	Hq & Hq Det 58th Med Bn	Hq & Hq Det 56th Med Bn
376th Med Coll Co	388th Med Coll Co	885th Med Coll Co
377th Med Coll Co	389th Med Coll Co	886th Med Coll Co
378th Med Coll Co	390th Med Coll Co	887th Med Coll Co
682nd Med Clrg Co	514th Med Clrg Co	891st Med Clrg Co
616th Med Clrg Co	616th Med Clrg Co	638th Med Clrg Co
(Hq & 1st Plt)	(2nd Plt)	(1st Plt)

The commanding officers of the Medical Battalions were designated as Beach Group Surgeons for the beach on which they were to work. It was their responsibility to set up Clearing stations in protected areas near the beach for care and evacuation of patients in their area. It was planned that each Beach Group Medical Battalion would operate independently until the three beaches were fused and the Beach Control Group Surgeon was in a position to coordinate the activities of all three. It was estimated that this policy could be adopted about D + 3. At this time it was also planned to evacuate all casualties from the center beach. The Beach Group Surgeons were notified of the number and patient capacities of APA's, XAPA's, and AKA's that would be available for evacuation purposes on D-Day, and which of these would be off their respective beach.

In order to maintain an efficient chain of evacuation as the combat troops moved forward, two other Medical Battalions were scheduled to arrive in the area on later phases. These were to take over the duties at the beach while the others moved forward with the Army.

Preparations were also made to have available by D + 5 an ambulance company to assist the medical battalions in evacuating casualties. Two (2) other ambulance companies were scheduled for later phases, D + 10 and D + 20.

HOSPITALIZATION

The provisions for hospitalization were subject to constant changes in the number of troops to be used in the amphibious stages of the operation and the land operations to follow. As the troop build-up figures became stabilized it was possible to estimate required number of beds and make plans for the hospital needs. The following chart shows the medical support for the Divisions in addition to the Medical Battalions (Sep):

<u>3rd Inf Div</u>	<u>36th Inf Div</u>
10th Field Hosp (2 Units)	11th Field Hosp (2 Units)
5 Gen Surg Teams	3 Gen Surg Teams
1 Orthopedic Team	1 Neuro Surg Team
1 Thoracic Team	1 Thoracic Surg Team
1 Maxillo-Facial Team	1 Shock Team
1 Neuro-Surg Team	1 Orthopedic Team
1 Shock Team	
	<u>45th Inf Div</u>
	10th Field Hosp (1 Unit)
	11th Field Hosp (1 Unit)
	4 Gen Surg Teams
	1 Maxillo-Facial Team
	2 Dental Pros, Teams
	1 Shock Team
	1 Orthopedic Team

The Field Hospitals, augmented by personnel of the surgical teams as listed, were to accompany the assault troops, land as quickly as possible on D-Day, and set up and operate in conjunction with the Divisional Clearing Station.

During the period D ~~f~~ 1 to D ~~f~~ 4, if possible, three (3) Evacuation Hospitals, Semi-Mobile (400 beds) were to be put ashore to provide facilities for farther surgical treatment and means of holding patients who were expected to recover in a short period of time. The hospitals were to work in back of the divisions as follows:

<u>3rd Inf Div</u>	<u>45th Inf Div</u>	<u>36th Inf Div</u>
95th Evac Hosp	93rd Evac Hosp	11th Evac Hosp

Evacuation Hospitals (750 beds) were scheduled to arrive on later phases, approximately D ~~f~~ 10, to augment the 400-bed units.

The hospital schedule was so arranged as to have the following number of beds available for both French and American Forces by D ~~f~~ 10:

3 US Divisions	4 French Divisions
1 Arm Hq (US)	2 French Corps
1 Corps (US)	
2 Field Hospitals	3 Field Hospitals
3 Evac Hospitals (400 beds)	4 Evac Hospitals (400 beds)
3 Evac Hospitals (750 beds)	2 Evac Hospitals (750 beds)

Assuming that four (4) of the seven (7) 400-bed Evacs would be set up, equaling 1600 beds, and five (5) of the 750-bed Evacs, with a capacity of 3750 beds, plus five (5) Field Hospitals which can comfortably accommodate 1000 patients, (1/2 normal capacity), there would be approximately 6,350 beds available.

With an increase in troop strength by D ~~f~~ 15, there would be two (2) more 750-bed Evacs available, making a total of 7,850 beds. With the changes to be expected by D ~~f~~ 20, a schedule of available beds was planned as follows:

Field Hospitals	- - - 5 - - -	Totaling	1,000 beds
400-bed Evacs	- - - 7 - - -	"	2,800 "
750-bed Evacs	- - - 7 - - -	"	5,250 "
Convalescent Hosp	- - - 1 - - -	"	1,500 "
General Hosp	- - - 2 - - -	"	3,500 "
Station Hosp	- - - 1 - - -	"	500 "
		Total	- 14,550 beds

Thus, the number of available beds ashore would accommodate approximately 6% of the troop ashore.

Insofar as possible, the French hospitals were equipped with American materiel and staffed by French personnel. The officers were trained in the use of the equipment and they in turn instructed other personnel of their hospitals.

All the Field and Evacuation Hospitals selected for the operation were authorized to draw excess equipment to allow for 20% expansion in case necessity dictated. In addition to this they were allowed other excess equipment on a temporary loan basis, this to be carried along for use in case of emergency.

Arrangements were made with the Army Transportation Section to furnish trucks for combat loading of all hospital equipment so that they would be able to roll directly off the boat to the site that had been chosen for them.

Arrangements for building materials to be used for fixed medical installations in the event that suitable buildings would not be available, were submitted to the Engineers.

All units were instructed to notify this headquarters of all captured enemy medical installations, giving information as to location, size, staff of medical personnel, and number of patients, so that such installations could be utilized to provide medical care for POW patients.

To provide laundry service for the hospitals, Quartermaster Laundry Units were to be attached to the hospitals at the ratio of one (1) unit for each 750-bed Evacuation Hospital and one (1) unit for two (2) 400-bed Evacuation Hospitals.

SUPPLY

Planning for the provision of medical supplies and equipment necessary to support the troops involved in the operation was begun as quickly as the first tentative troop list was obtained. Throughout the planning stages plans were revised in accordance with changes in troop strength and characteristics of the operation.

The basic plan, as in other operations of similar nature, required that a certain amount of medical supplies and equipment be set up for the assault forces to be carried in with them. In addition, it was necessary to provide supplies to build up required levels of supply in the combat zone.

This was accomplished by submitting a basic requisition to SOS NATOUSA, requesting enough supplies to cover the first thirty-day period of the operation and at the same time a second requisition was submitted to cover the second thirty-day period. After sixty (60) days supplies would be shipped on automatic schedule from the United States directly to France.

Supplies requested for the first period were broken down into six (6) phases, each phase covering a five-day period, in accordance with the convoy plan.

Each sub-task force commander was furnished with sufficient amounts to provide seven (7) days maintenance for his troops, these to be carried along in the initial landings. On reaching shore the Beach Group Surgeon was responsible for setting up dumps in protected areas where these supplies could be consolidated and prepared for issue.

Preparations were made to make a pre-issue of certain supplies to the assault troops as an individual reserve. These items were: Atabrine, Quinine, Prophylactics Mechanical, and Lotion Sickness Preventive Capsules. The Base Medical Depots were to hold these items and issue them to the sub-task force commanders or their representatives, who would be responsible for distribution of same to troops.

Through lessons learned in other operations precautions were taken to make certain that fragile supplies would be well packed and as far as possible, supplies were to be boxed so as to be individual one-man loads, each not to exceed seventy (70) pounds in weight, and the size to be approximately 18 x 24 x 36 inches, waterproofed and strapped in order to stand rough handling over the beaches.

Security cargo, such as narcotics, whiskey, and gold, were to receive special handling, and be stored separately from other cargo, and in custody of the ship's cargo security officer.

All boxes were to be clearly marked so they would be delivered to the proper place, lists of contents to be attached to the outside of the box, weights and cubage to be stamped on the outside of the box to facilitate stowage on ships and checking tonnages being unloaded at the beaches. Master packing lists were placed in the hands of the Beach Group Surgeons so that they would know what and how much supplies they were to get, and on what ships the supplies would be.

Supplies for the French were handled in like manner except that in marking, the Tri-Color was to appear on the outside of the box in order that those supplies could be easily segregated when being unloaded, and be delivered directly to the French Medical Dump.

Certain amounts of medical supplies were set aside for Civil Affairs use, and were distinctly marked so they could be kept apart from Military supplies. These were to be delivered to the American medical dumps and held there until called for by a representative of Civil Affairs Office, who would be notified when and where the supplies would be available.

The bulk of supplies for the sub-task forces were contained in Beach Medical Maintenance Units, which have a balanced stock of medical items to maintain 5000 troops for a thirty-(30) day period, and were especially designed for this type operation. These units were set up in amounts in accordance with the number of troops to be used in the operation, with additional critical items as a safeguard against any unforeseen developments. These items included: blood plasma; morphine syrettes; crinolin; plaster of paris; plaster of paris bandage; sulfaguanadine tablets; paregoric; litters; blankets; dressings; oxygen; wadding sheet; first-aid kits; and rubber tubing.

Provisions were made for hospital ships to carry medical supplies to the Target Area whenever possible.

In order to establish and operate medical dumps at the beaches, advance detachments of the Army Medical Depot Company were to accompany the assault troops and be prepared to disembark as soon as the beaches were cleared. Other detachments of the depot were to land and move forward with the troops and set up supply points in strategic areas, staying as close as possible to the front lines so that medical supplies would be readily available for the advancing units.

The dumps at the beaches were to receive all supplies being unloaded from the ships, prepare them for delivery to the forward areas and make issues to the troops in the rear areas. This procedure was to continue in force until the Base Section was prepared to take over these duties at the beach.

Arrangements were made for medical units to draw necessary equipment to make up Table of Equipment shortages and any authorized excess items such as, tentage, cots, blankets, pajamas, generators, trailers, and field ranges.

Plans were made for a Mobile Optical Unit and a Portable Dental Laboratory Unit to arrive at later stages of the campaign and to accompany the Medical Depot so that type of service rendered by each would be readily available in the forward areas.

SANITATION & HEALTH

In general, the sanitary conditions and health problem in France were considered to be comparable to that of Italy or Sicily, with the exception of the prevalence of malaria. In order to cope with this situation it was necessary to impress upon the minds of all troops the importance of individual methods of protection against disease and infection. Commanding officers were responsible for protecting and maintaining the health of all troops under their command. To assist them in this matter, organization and unit surgeons assigned to

commands as staff officers were to be consulted for professional advice in all matters pertaining to disease prevention and sanitation.

Particular emphasis was placed on the control of the following diseases:

1. Malaria: Long considered a major health factor in warfare, special attention was paid to preventive measures and treatment. Although it was assumed that malaria in France would not be a problem such as encountered in other operations, Atabrine suppressive therapy was to be initiated at least ten (10) days prior to D-Day and was to continue until instructions to the contrary were issued by the Army Surgeon. This was considered necessary due to a large number of the troops being seeded with malaria during campaigns in Africa, Sicily, and Italy, and recurrences were considered inevitable unless control measures were continued.

The dosage prescribed was 0.1 gram daily, seven (7) days a week. Provisions were made for all troops to be furnished with individual units of insect repellent and instructed in the proper methods of use. Whenever possible, mosquito bars and headnets were to be used until otherwise ordered.

Malarial survey and control units were to be responsible for locating malarious areas and instituting control measures that could not be covered by individual units.

2. Diarrhea and Dysentery: All units were notified that mess sanitation must be enforced, particularly as to mess kits cleaning, frequent inspection of food handlers, fly-control measures, waste disposal, and preparation of raw vegetables purchased locally. During the early phases of the operation troops were instructed that food must be consumed from the original containers until proper facilities were available for washing mess gear.

All water used in France was to be considered non-potable, regardless of source, unless purified by Engineer Water Supply Units, chlorinated in lyster bags or individually by the use of Halazone Tablets. In combat operations or wherever conditions would not permit more suitable facilities, straddle trenches were to be used for human waste disposal.

3. Venereal Disease: Plans were made to establish a Venereal Disease Hospital immediately after the landings. As this type hospital is not normally considered an integral part of army hospital installations, it was to be entirely provisional in make-up. A tentative T/O & E was drawn up and plans made to utilize personnel of one of the Medical Clearing Companies to operate the hospital.

Preparations were made for all medical units to operate individual prophylactic stations and also to establish additional stations as needed. Preparations were also made to furnish individual prophylaxis supplies for use in the event that established stations were not available in certain sectors.

Unit commanders were instructed to give frequent talks on the problems of venereal disease and whenever possible, to use training films which were found to have a very good effect on all personnel.

4. Immunization: Unit commanders were instructed to make certain that all immunizations required in the Theater were completed prior to D-Day, and that they be kept up-to-date thereafter.

5. Neuro-Psychiatric Casualties: It was planned to use the Beach Clearing Stations to hold neuro-psychiatric battle casualties during the initial phase of the operation until such time as Division Clearing Stations would be in a position to handle them. It was intended that, insofar as possible, this type of patient would be held as close to the forward areas as conditions would permit.

PERSONNEL AND TRAINING

In order to provide adequate care for the expected casualties in the landing operations, surgical and shock teams were taken from the assigned General and 750-bed Evacuation Hospitals that were phased on later priority, to reinforce the Field and 400-bed Evacuation Hospitals. Skilled technicians from the same pool were attached to the Field Hospitals to take the place of nurses who were not scheduled to arrive in France until 3 f 4. In addition to this, it was necessary to furnish extra personnel for the First Special Service Force; this requirement was met by attaching six (6) medical officers and one (1) enlisted technician to this Force.

Forty (40) medical officers were required to care for troops while on board transports going to the Target Area and to care for any wounded personnel that might be evacuated to those same ships. All personnel were to remain with the units to which they were temporarily attached until their own units arrived in the combat zone and their services required there.

Before embarkation, the medical battalions were attached to the various divisions which they were to support, and went through a series of training programs and simulated battle exercises under conditions which could be expected in the actual operation.

Two (2) of the three battalions were already veterans of several operations and were very well acquainted with conditions

to be expected; the other battalion had no previous combat experience, but being a well-organized unit, showed excellent results in the training period.

REPORTS AND RECORDS

All units concerned were notified of the reports and records which would be required of them. Arrangements were made to provide the necessary blank forms and personnel who were responsible for making the reports were instructed in the proper method of preparing them. Emphasis was placed on the importance of prompt and proper submission of all reports during the early phases of the beach operations.

In addition to the above, attention of all concerned was directed to pertinent Army Regulations, Field Manuals, and Circulars, with their subsequent modifications, as published by Seventh Army and higher Headquarters.

DISTRIBUTION OF WHOLE BLOOD AND PENICILLIN

In order to provide an adequate supply of whole blood during the landing operations, five hundred (500) units of six hundred ccs. (600 cc) were to accompany the assault troops on D-Day. The following arrangements were made for bringing the blood into the Target Area.

- 3rd Division - Refrigeration Unit (Vehicle)
4 boxes containing 144 units of blood.
Detachment of 6703 BTU consisting of
two (2) enlisted men.
- 36th Division - Refrigeration Unit (Vehicle)
7 boxes containing 168 units of blood.
Detachment of 6703 BTU consisting of
two (2) enlisted men.
- 45th Division - Refrigeration Unit (Large Vehicle)
8 boxes containing 188 units of blood.
Detachment of 6703 BTU consisting of
one (1) officer and one (1) enlisted man.

An additional one hundred (100) units of blood were given to the Special Service Force, and small amounts were placed on some of the hospital ships.

Beginning D f 1 and continuing until full air communication was established, blood was to be supplied daily by aircraft from the Base BTU (Italy) to Corsica, and from there to France by PT boat and delivered to the center beach where it was to be picked up by one of the BTU detachments for distribution as needed.

Two thousand (2000) vials of Penicillin were to be delivered daily, being handled in the same manner as whole blood.

VETERINARY

As the initial assault phase was to be an amphibious operation, there was no need for Veterinary Animal Service during the period. Veterinary Animal Service would not be required until the line of advance spread northward into the area of Southern France where mountainous terrain made the use of mules profitable. For this reason the two major Veterinary Animal Service Units, 45th Veterinary Co. (Sep) and 17th Veterinary Evacuation Hospital, were not phased in until D + 20 and D + 25 respectively. These two units were capable of giving more than adequate support for the number of mules then assigned to the Seventh Army, as the 45th Veterinary Co. (Sep) could render support and service to 1200 horses or mules, and the 17th Veterinary Evac Hospital had a 150 T/O-stall capacity. The earliest phased Veterinary Service Unit was the "T" Veterinary Detachment 8580 JJ, Food Inspection, (now the 890th Medical Service Detachment), which was scheduled for the D + 8 convoy.

Two (2) of the Field Artillery Battalions (601st and 602d) assigned to Seventh Army for this Operation, had Veterinary Detachments assigned to them, but the use of the mules of these units did not enter into the plan for the initial assault phase, although one of the Battalions, the 601st, was to land by Glider during this phase. Therefore, it was planned that the Veterinary Detachment of this Battalion should be transported to the Target Area along with the one of the 602d Field Artillery Battalion. This grouping of the two Veterinary Detachments, consisting of three (3) Veterinary officers and twelve (12) enlisted men, permitted the best possible supervision for the 1200 mules being shipped from Italy to Southern France.

AMPHIBIOUS & LAND
OPERATIONS
IN FRANCE

EVACUATION

The landing of medical units accompanying the assault forces on 15 August 1944 was accomplished with very little difficulty and on schedule as planned, except for the 56th Medical Battalion (Sep) which was working in support of the 36th Infantry Division at CAMEL Beach, in the vicinity of St. Raphael, France. It had been planned to open Clearing Stations on all three beaches at approximately H + 6 hours (1400) on D-Day, but due to the stiff enemy opposition encountered at CAMEL Beach it was not possible to open there before H + 16 hours.

The over-all success of the landings made it possible for the Beach Control Group Surgeon to assume control of the medical services sooner than had been anticipated, thus relieving the Beach Group Surgeons of the extra responsibilities, such as caring for medical supplies and making their own evacuation arrangements.

Evacuation on D-Day was carried out as planned, making use of APA's and XAPA's. The two (2) hospital ships which were scheduled to arrive in the area at dawn of D + 1 were late in arriving; therefore, it was necessary to make full use of the other ships. However, due to the light number of casualties being received, it was possible to hold cases which could be more suitably accommodated on hospital ships.

From D + 2 to D + 5 the hospital ships made trips to the three beaches to pick up patients. Owing to the congested condition of the roads connecting the beaches at that time, it was considered that this system would prove more efficient. After D + 5 and until D + 7 the casualties were transported by ambulance to the center beach (DELTA) St Maxime, France, for loading on hospital ships.

Inauguration of air evacuation on D + 7, along with a change in policy by the French, permitting only the evacuation of their patients, who were residents of North Africa, and the establishment of a holding policy in France for POW's, the need for hospital ships declined sharply, and during the period D + 15 to D + 25 none were required to evacuate patients from Southern France.

Due to the rapidly changing tactical situation, it became necessary to release certain medical units from the Beach Control Group so that evacuation from the forward areas could be carried out efficiently, but still leave sufficient facilities at the beach so as not to interrupt evacuation to ships.

To accomplish this the 58th Medical Battalion, Hq & Hq Detachment, with attached Collecting and Clearing Companies, remained at DELTA Beach to handle evacuation to the ships. The

886th Medical Collecting Co and the 1st Platoon of the 891st Medical Clearing Co. stayed at CAMEL Beach to handle casualties being evacuated to that sector, and the 376th Medical collecting Co. and the 1st Platoon of the 682nd Clearing Co. remained at ALPHA Beach, Cavalaire, France, to handle evacuation from that area. As the campaign progressed constant changes in the beach evacuation set-up were made, until on D + 39 the 164th Medical Battalion and attached companies arrived in France and relieved all the Army medical units operating the beaches, thus making it possible for them to rejoin their Parent units in the forward areas and assist in carrying out evacuation to the rear.

When the Base Section, Station, and General Hospitals arrived in France they were established as close to the Army area as was considered practicable.

With the movement of troops northward and the securing of air-fields, evacuation to the rear by air played a very important part in the chain of evacuation. By this means it was possible to evacuate more patients in a shorter period of time, thus making more beds available in the Army hospitals, and relieving ambulances for frontline work where they were sorely needed. X

X In working on such a long front and with the speed of the advance, it was very difficult to maintain efficient operations as there were not a sufficient number of ambulances available. This was overcome by constantly shifting ambulances from one area to another whenever the necessity arose. The situation was further relieved with the inauguration of hospital train service and establishment of pick-up points well forward.

X "Surgical Lag", (the time, expressed in hours, required for a hospital to complete the surgery required on all moderately to severely wounded or injured casualties then present) determines when to stop sending casualties to a hospital. Therefore, it was necessary that the evacuation officer keep a close watch on all hospitals in order to determine in advance when to notify the evacuating agencies to shift patients to different hospitals.

As the campaign progressed and more combat troops were assigned to Seventh Army, the medical service allocated to support the originally assigned troops was inadequate to serve the increased troop strength. Although repeated efforts had been made to obtain additional units, up until the beginning of November only one (1) Medical Battalion and attached companies and one (1) Field Hospital over and above the Medical Battalions and Field Hospitals that landed in Southern France at the beginning of the campaign, were actually present for duty and serving the three new Divisions already committed to

action. The additional medical battalion was of no assistance in the Army link in the chain of evacuation, as it was needed to serve one of the new Corps that had come under Army control.

With another increase in troop strength, which occurred when two (2) more Infantry Divisions were placed in the line, making a total of seven (7) Infantry Divisions and one (1) Armored Division, the very small reserve of ambulances diminished to a critical margin, and a situation developed which necessitated skillful maneuvering. This condition was somewhat relieved upon the arrival of an additional ambulance company (548th) on the 13th of November, and by the withdrawal of eight (8) ambulances from Field Hospitals. Later in the month one (1) platoon of the 596th Ambulance Company, (a new arrival in the Theater) was attached to the 52nd Medical Battalion for operations, and two (2) platoons were attached to the 181st Medical Battalion. To coordinate the evacuation performed by the 181st Medical Battalion, an advance Control Point was established at a convenient place for all the separate companies. Reports were made to this point every three (3) hours, giving the number of patients already evacuated, bed status, and surgical capacity of the different Army hospitals. Using this method, it was possible to route patients to appropriate hospitals when either of the above-mentioned situations became critical. It also enabled the ambulance control officer to shift ambulances to various areas as the occasion demanded.

In anticipation that river crossings might have to be made in the future, plans were started to make use of DUKW's as evacuation craft in the event bridges would not be available.

× In the latter part of November notification was received that in the near future the following medical units would be available for Seventh Army:

Ambulance Companies	3 -
Medical Bn Hq & Hq Det	2 -
Medical Collecting Co	3 -
Medical Clearing Co	1 -
Medical Group Hq	1 -

Among these it was felt that the only units that would prove of immediate value to the Army were the ambulance companies, one (1) Medical Battalion Hq & Hq Det, three (3) Medical Collecting Cos., and one (1) Medical Clearing Co., as there was an urgent need for these units to help meet existing requirements. The extra Medical Battalion Hq & Hq Det and the Medical Group Hq were not considered to be of any real benefit toward bolstering medical support of the Army at the time,

During the month of December the above-listed units

arrived in Army area with numerical designations as follows:

- 67th Medical Group Hq
- 166th Medical Bn Hq & Hq Det
- 433rd Medical Bn Hq & Hq Det (Colored)
- 391st Medical Collecting Co
- 392nd Medical Collecting Co
- 393rd Medical Collecting Co
- 589th Ambulance Co (Colored)
- 591st Ambulance Co (Colored)
- 597th Ambulance Co
- 619th Medical Clearing Co

As there was no appropriate use for the 67th Medical Group Headquarters, Sixth Army Group **was** notified that this unit could be considered surplus and available for reassignment to Twelfth Army Group. All concerned concurred, and the reassignment was effected. X

Upon the arrival of more combat troops and another Corps (XXI), it became necessary to set up a new evacuation schedule. The 56th Medical Battalion was relieved of attachment to VI Corps and reverted to Army control. The 116th Medical Battalion Hq & Hq Det, with the 431st Medical Collecting Co. and one (1) platoon of the 619th Medical Clearing Co. were attached to VI Corps, replacing the 56th.

The 56th, with attached collecting and clearing companies was to evacuate XXI Corps, and the 52d and 181st Medical Battalions to continue evacuating VI and XV Corps troops. To assist these units in evacuation the 591st Ambulance Co. and two (2) platoons of the 596th Ambulance Co. were attached to the 56th, the 597th Ambulance Co. was attached to the 52d Medical Battalion, and one (1) platoon of the 596th Ambulance Co. was attached to the 181st Medical Battalion. At the time, enough medical units were available to Army to properly handle evacuation so two (2) platoons of the 589th Ambulance Co. were loaned to CONAD (Continental Advance Section of Communications Zone) until such time as they would again be needed by Army.

The 433rd Medical Battalion Hq & Hq Det, 391st, 392d, and 393rd Medical Collecting Cos. and one (1) platoon of the 619th Medical Clearing Co. arrived late in December. The 55th Medical Battalion and attached companies remained attached to XV Corps for operations.

Notification was received that plans for the future were to be based on furnishing support for ten (10) Infantry Divisions and three (3) Armored Divisions. In order to accomplish efficient area service, G-4 was advised that the following additional medical units would be required:

Medical Bn Hq & Hq Det	. . .	2
Medical Collecting Co	. . .	3
Medical Clearing Co	. . .	3
Ambulance Co	. . .	2

At the end of the year evacuation channels were in better condition than at any previous time. However, a retrograde movement for hospitals was imminent, which would again lead to transportation difficulties, as it meant many more long miles for patients to travel from Clearing Stations to Evacuation Hospitals.

HOSPITALIZATION

Units of the 10th and 11th Field Hospitals, operating in conjunction with the Division Clearing Stations, were set up on their designated beaches immediately after the beaches were secured and a suitable place located. This type unit does not ordinarily present much of a problem in getting moved as transportation, in addition to their own, is furnished by the division which they are supporting, and as they are quite small, it is usually easy to find a suitable building in which they can set up.

The Evacuation Hospitals; (400-beds) 11th, 93rd, and 95th, were able to move from the beach directly to the sites that had been previously selected for them as the equipment had been combat loaded and no time was lost in getting them set up. Personnel and equipment of the three hospitals were unloaded beginning 15 August (D-Day), two (2) days earlier than had been planned, and by the 17th of August they were ready to accept patients.

With the tactical situation proceeding very well in the early days of the campaign, there was no need to evacuate all casualties to the near shore (Naples, Italy), as it was possible to hold patients with minor illnesses and injuries who could be expected to be returned to duty within a short time. To provide facilities for holding such patients it was necessary to establish a provisional convalescent hospital as the Bray Convalescent Hospital was not scheduled to arrive in France until D + 25.

Equipment to set up and operate this provisional unit was secured from various services and additional equipment not available from these sources was borrowed from medical installations under Seventh Army control. Personnel from the 1st Platoon of the 682d Medical Clearing Company were selected to set up and operate the hospital which was to have accommodations for 250 to 300 patients. This unit functioned very well, and proved to be of great value as patients were sent back to their own units upon recovery instead of being evacuated to the near shore for hospitalization and lost to the

Army entirely.

As the campaign progressed through Southern France at a rapid pace it was necessary to make frequent trips as close to the front lines as possible to pick out suitable hospital sites or locate buildings in order that hospitals could be moved as quickly as the areas were cleared of the enemy.

The fast and frequent movement required put a severe strain on the organic transportation facilities of the hospitals and in some instances it was necessary to borrow trucks from other medical units in order to complete the movement of a hospital. Usually the 400-bed Evacuation Hospitals were able to take care of their own needs, but the 750-bed hospitals caused somewhat of a problem as frequently the Army Transportation Section was not able to furnish trucks at the time they were needed, thus causing occasional delay in getting the hospitals moved.

The 750-bed Evacuation Hospitals arrived in France beginning 21 August, but were delayed in setting up initially due to the transportation shortage at that time. These units came into the Target Area with all equipment pre-loaded on trucks, but when the trucks rolled off the boats the equipment had to be immediately unloaded and the trucks used to make a trip to the forward areas with a load of critical supplies; i.e., ammunition and rations, before they could return to the beach, pick up the hospital equipment, and move to sites previously selected.

Two (2) enemy hospitals were captured intact with equipment, medical personnel, and patients, one at Aix-en-Provence, and the other at Draguignan, France. Until arrangements could be made to consolidate these installations, it was necessary to place medical personnel of our own units in charge of them. The hospital at Draguignan provided a very good location for the 51st Evacuation Hospital (750-bed). It was capable of holding 1,000 patients, had running water and electricity, and the building itself was in excellent condition. Until the German Hospital at Aix-en-Provence was ready to take all POW patients as planned, the 51st was able to take care of many POW's in addition to allied personnel.

In October the troop strength of Seventh Army was increased, bringing about a shortage of hospital facilities. In order to ameliorate this situation a 400-bed Evacuation Hospital and a Field Hospital were obtained from Third Army on a temporary loan basis until such time as additional medical support could be furnished by the Theater.

The 400-bed hospital on loan from Third Army was taken away within a few days, leaving Seventh Army very short of

this type unit and causing a serious surgical problem. Moderately to severely wounded casualties were being forced to wait for surgery on an average of seven (7) to twelve (12) hours, and in some instances as much as twenty (20) hours. This same situation was prevalent in Field Hospitals.

On 11 November notification was received from Sixth Army Group that three (3) Evacuation Hospitals (400-bed), would be available for Army, but that the personnel would need further training before being allowed to set up for operation in the combat area. Plans were made to place the personnel of these units on temporary duty with hospitals already functioning until such time as they were in a position to set up their own units and begin operations. This procedure was carried out for two (2) weeks, at the end of which time plans were made to put two (2) of the hospitals (116th and 117th) into operation. When they were in a position to receive patients the Army evacuating agencies were instructed to use careful judgement in the type casualties they sent to these hospitals and to send only minor cases whenever possible in order that they could gradually become accustomed to the type work that would be expected of them in the future. The personnel of the 132d Evacuation Hospital were left on duty with other units at the time, since it was felt that the two new hospitals in operation there would constitute adequate facilities to care for patients until the members of the 132d had received more actual training in field work.

As the need for Field Hospitals became more acute repeated requests were made to ETOUSA, through Sixth Army Group, to provide Seventh Army with two (2) additional units of this type. The four (4) Field Hospitals already in operation, augmented by two (2) additional units, were considered to be the minimum requirement necessary to care for non-transportable⁶³, to accomplish the assigned medical mission, and to maintain the standards demanded by higher authority.

In order to relieve the situation somewhat, it was decided that the Field Hospitals then assigned to Seventh Army and attached to VI and XV Corps should be relieved of such attachments and placed under direct Army control, thereby permitting more flexibility. & the arrangement, stood at the time, one (1) unit of a Field Hospital supported a Division and for each two (2) Divisions, an extra unit was required to permit leap-frogging. VI Corps had a total of six (6) units while XV Corps had a total of three (3) units. In view of the fact that more divisions were to be committed at an early date, and in the event XV Corps acquired one (1) Division, there would be no reserve hospital unit for leap-frogging@;. If XV Corps acquired two (2) more divisions, there could be no leap-frogging and one (1) Division would not be supported at all. Thus, if the hospitals were under Army control it would

be easier to shift the units around where they would be most needed. The plan was submitted to G-4 and G-3 for approval and the changes made accordingly.

Due to the uncertainty of obtaining additional Field Hospitals as requested, efforts were made to have the 57th Field Hospital released from CONAD and made available to Seventh Army to give additional medical support for non-transportable casualties. Arrangements were made whereby this unit was to be placed on duty with Army on a temporary loan basis and subject to recall at any time CZ ETOUSA needed it. This did relieve the pressure, but still left the matter unsettled since it was not known when the 47th would be recalled, and as far as could be ascertained, there were still no prospects of additional Field Hospitals being assigned to Seventh Army.

In the early part of November the Headquarters and 1st Platoon of the 650th Medical Clearing Co. set up a 100-bed Hospital in the vicinity of Romain, France, for the purpose of relieving pressure on the 11th and 51st Evacuation Hospitals backing up Division Clearing Stations of the XV Corps. As this was a small installation, without a great amount of equipment, the only patients sent there were those suffering minor injuries or illnesses.

Notification was received that medical plans for the near future were to be based on required units to support nine (9) Infantry Divisions and nine (9) separate Infantry Regiments. This support to be in addition to medical units already requested to support seven (7) Infantry Divisions. Working on the assumption that hospitalization would remain at about the same ratio as in the past, the following units were requested:

Field Hospitals	2
Evacuation Hospitals (400-bed). .	3
Auxiliary Surgical Group	1
Medical Gas Treatment Battalion .	1

In the forward movement it was expected that many Allied Prisoners-of-war would be uncovered in territories formerly held by the enemy. With this in mind the medical section began preparations for the medical care and evacuation of such personnel. There was very little information available as to what basis to use for determining the medical needs, but suggestions were made as to type and number of medical units needed for this purpose. The following listed units were judged to be a minimum requirement:

Medical Bn (Sep) Hq & Hq Det . .	2
Medical Collecting Co	6
Medical Clearing Co	2
Field Hospital	3
Malaria Control Unit	1

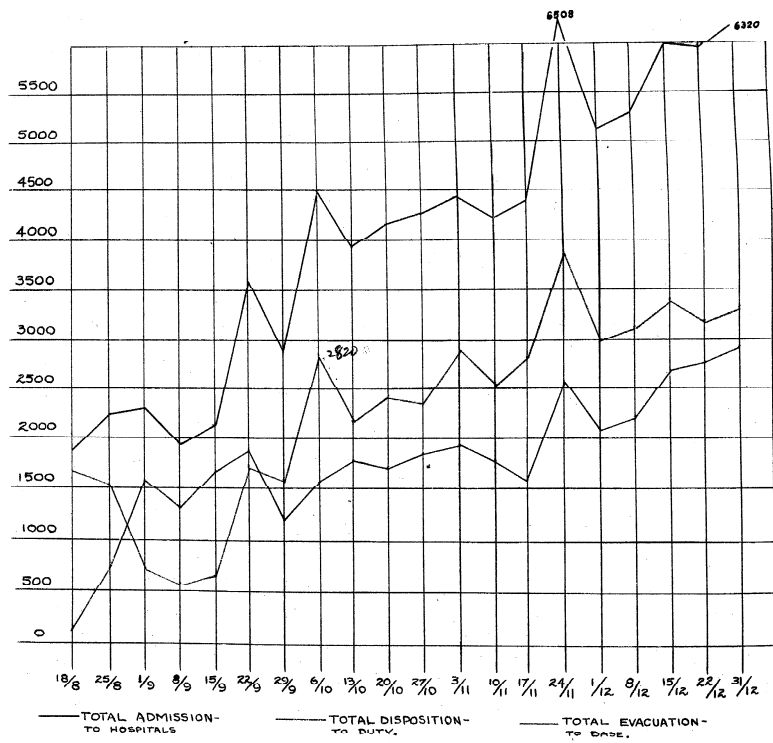
During the advances wounded civilians from the forward areas were being evacuated out of the area to Army Evacuation Hospitals. This overtaxed the medical, surgical, and bed facilities of these installations, and interfered with the proper handling of U.S. patients. The civilians in most instances could have been sent to local or nearby civilian hospitals. It was therefore, necessary to direct the attention of all concerned in this matter to the proper procedure of disposing of such patients. The following information was published :

"Except in extreme emergencies and for immediate life-saving treatment, civilians will not be evacuated to Army Evacuation Hospitals, but will be hospitalized in available civilian institutions provided for that purpose".

In the early part of December a shifting of troops and zones took place which necessitated moving some of the hospitals. The hospitals backing up XV Corps (11th, 116th, and 117th) were in excellent position to receive patients. Serving the 36th Infantry Division and the 2d Division Blinde Française, the 51st Evacuation Hospital, located in St Die, was in a very favorable location. Within the VI Corps boundaries and Army area there were no buildings available suitable for housing hospitals, which would be required to support the Corps. The most desirable location was in the Mutzig-Molsheim area, but Sixth Army Group was contemplating using that region, and the use of the buildings there was denied Seventh Army. The Army Chief of Staff, G-1 and G-4 were notified of this situation and were requested to make some arrangements whereby the area could be used for hospitals. Arrangements were finally worked out between the Army and Sixth Army Group so that hospitals could be set up in Mutzig, and the 59th, 95th, and 132d immediately moved in. This avoided the undesirable situation of setting up in tents during the winter months.

When a change in the tactical situation developed the Seventh Army boundaries were enlarged to include part of Third Army area, and one (I) Infantry division of Third Army was attached to Seventh Army. It then became necessary to set up a hospital to support that division. This was accomplished by moving the 93rd Evacuation from Bischwiller to Dieuze where they would be in a more favorable position to receive patients from that division, and also the other troops that would eventually move into the area.

Numerous requests were made to obtain a Medical Gas Treatment Battalion, but of those in the Theater all were committed and it appeared unlikely that such a unit would be assigned to Seventh Army in the near future. A definite need for this type unit exists, for in the event of a chemical attack the medical service would not be in position to cope with the situation.



ADMISSION - DISPOSITION - EVACUATION

In order to be prepared should the necessity arise wherein the hospitals would be required to set up under canvas during the cold months, a list of equipment for each hospital was submitted for winterization:

FLOORS (Each Hospital)

2 for Surgery Tents
39 for Ward Tents
45 for Pyramidal Tents
4 for Storage Tents
4 for Large Wall Tents
2 for Small Wall Tents

Ramps connecting X-Ray, Pre- and Post-Operating tents would necessarily have to be built so that no trouble would be encountered when patients were being wheeled between services and clinics.

Some type buildings would be required for a motor pool in order that repair and maintenance work be carried out. A road for the motor pool would be necessary, built to the following specifications, which were considered as a minimum requirement:

200 yards x 9 feet
100 feet x 50 feet parking area

300-foot water pipe line from a 3,000 gallon reservoir to be laid under the frost line.

In the closing days of December the hospital situation was abruptly changed due to the necessity for moving many hospitals to rear areas in accordance with changes in the tactical situation. Although the prepared plan called for movement of all hospitals, some of the 400-bed Evacuations were permitted to remain fixed.

VETERINARY

The "T" Veterinary Detachment 8580 JJ, Food Inspection, consisting of one (1) Veterinary Officer and four (4) enlisted men, landed in the Target Area on D f 8. This Detachment, operating with the aid of a captured vehicle, successfully covered the three Beaches and supervised the issue of Field Rations at the QM Class I Supply Dumps.

The Army Veterinarian supervised the loading of the two(2) major Veterinary Units - the 45th Veterinary Co (Sep) and the 17th Veterinary Evacuation Hospital - on the Near Shore, and arrived with the 17th Veterinary Evacuation Hospital in Southern France on D f 25.

In the meantime, 1200 mules of the 601st and 602d Field Artillery Battalions arrived in the Target Area, having been transported by LST's. The shipping of these animals by LST's proved to be an efficient and expeditious method. The lower decks or the holds were converted into stall space by the use of sand bags and earth, forming picket lines running the length of the ship. The mules were lead aboard the LST's over the lowered ramp and unloaded in the Target Area in the same fashion. Bulldozers quickly removed the manure and earth from the lower decks of the LST's after the mules had been disembarked.

The Army Veterinarian, upon arrival in Southern France, reported to the Army Surgeon, and after a conference, the Veterinary units were committed to give the following support:

The 2d Platoon of the 45th Veterinary Co. (Sep) was ordered in support of the 601st and 602d Field Artillery Battalions, these units having a mission in the Maritimes Alps north of Nice. The remainder of this Company went into staging at Lons le Saunier, while the 17th Veterinary Evacuation Hospital began staging at St. Raphael.

Request had been made by the French for additional Veterinary units. Therefore, after a conference with the Chief of Staff and Veterinarian, First French Army, it was decided that Seventh Army would furnish additional Veterinary support in that only two (2) French Veterinary Ambulance Companies were supporting approximately 12,000 animals. On 18 September, the 17th Veterinary Evacuation Hospital set up as a Base Hospital in a French Artillery Caserne at Grenoble. On 21 September the 45th Veterinary Co. (Sep) (less 2d Platoon) moved to Guillestre to be in position to evacuate the animals of the French forces fighting in the Basse Alps area. On 24 September these two units were attached to the First French Army for operational control, but administration remained with the Seventh Army.

When the French forces moved northward into the Vosges Mountains with approximately 6,000 animals, the two (2) French Ambulance Companies moved up in support, and the 45th Veterinary Co. (Sep) (less 2d Platoon) took over the Veterinary support and evacuation of about an equal number of French animals in the entire Alps area from the Southern border of Switzerland to Nice. In order to be in position to do this, the 45th Veterinary Co (Sep) moved from Guillestre to Gap on 2 October. The 17th Veterinary Evacuation Hospital remained in Grenoble, as no suitable housing facilities could be located for them elsewhere, and excellent facilities for the hospitalization of animals during the cold, rainy season were already established. The lengthened line of evacuation for the two French Veterinary Ambulance Companies was not impaired since at this time they began to evacuate sick and wounded animals to Grenoble on an

animal-hospital train. Although the T/O-stall capacity of the 17th Veterinary Evacuation Hospital is 150 the unit frequently functioned over T/O capacity, and on one occasion reached a peak load of 236 patients.

During December the 17th Veterinary Evacuation Hospital reported an outbreak of sarcoptic mange among the French mules. Information and immediate control measures concerning the epidemic were passed on to the Veterinarian of the First French Army, and treatment was instituted at the 17th Veterinary Evacuation Hospital through the use of a sulphur fumigation chamber. This treatment, along with the suggested control measures given to the French, proved to be of great value in the control of the disease, the epidemic never reaching alarming proportions at any time.

With the assignment of the 513th QM Pack Troop (300 mules) to Seventh Army, it was necessary to give this unit Veterinary support. The 3rd Platoon of the 45th Veterinary Co. (Sep) was placed in support of this Unit, which was operating along the Maginot-Seigfried Line area southeast of Bitcha. The 3rd Platoon of the 45th Veterinary Co. (Sep) provided this unit with evacuation and hospitalization facilities. Patients (mules) requiring a long period of hospitalization, were evacuated to the Base Remount at Rambervilliers. A large number of battle casualties from mortar fire were cared for by this Platoon. The mules of the 513th QM Pack Troop at one time were used to evacuate wounded soldiers from the mountainous areas by the use of an improvised mule litter.

There were no K-9 dogs used by the Seventh Army during the year 1944. However, there are sixteen (16) lofts of pigeons, averaging sixty-five (65) birds to a loft, operated by the 226th Signal Operations Co. This unit does not have a veterinarian; however, the personnel of this organization are well trained, and there is a good system for the replacement of birds, which has helped to keep the health of the pigeons at a high level. As the various lofts are placed close to Army and Corps Headquarters, the Army Veterinarian has inspected these pigeon lofts frequently, and has thus kept a close watch on the health of the birds.

From the Beach Phase to the close of the year the 890th Medical Service Detachment (formerly the "T" Veterinary Detachment, 8580 JJ) continued to function in close cooperation with the Quartermaster Section of Seventh Army. The personnel of the Veterinary Food Inspection Service has satisfactorily performed the tremendous task of supervising the issue of rations at the Army Quartermaster Railheads, which are usually located at six (6) or seven (7) different sites. The frequent cold rains and freezing conditions early in December gave the Food Inspection Service a great deal of concern, but the loss of

foodstuffs to the Army was practically negligible. The drive into the Vosges Mountains caused the condemnation of a small number of frozen turkeys due to thawing, but the great majority of Seventh Army Troops had turkey dinners, both at Thanksgiving and Christmas. From D-Day to 1 January 1945, 31,451,000 rations of balanced "B", unbalanced "B", and Field types have been issued to Seventh Army troops under the supervision of the Veterinary Food Inspection Service of this Command.

The Veterinary Officer assigned to the 1st Medical Laboratory has worked in close cooperation with the Army Veterinarian in performing the various tests and examinations necessary in the preventive measures taken to preserve the health of the Command. In this connection it is felt that there should be a Veterinarian assigned to each division and that provisions should be made to include this position in the T/O of the division.

SURGERY.

Personnel. In order to provide adequate care for the expected casualties of the landing operation, surgical and shock teams were drawn from the assigned General and Evacuation Hospitals to reinforce the Field and 400-bed Evacuation Hospitals. Skilled technicians from the same pool were attached to the Yield Hospitals to take the place of their nurses until their arrival on D f 4. All of this reinforcing personnel remained with the units to which they were attached until their parent units landed. Finally a consultant in ophthalmology and a spare Tec 3, skilled in operating-room technic and anaesthesia, landed with the Army Surgical Consultant on D f 1. This officer and enlisted man proved invaluable. Proper care of the eyes was assured from the start, and with the landing of a Mobile Optical Unit, spectacles were being repaired and replaced within the first five (5) days. Shortly after the landing of the first platoon of the 10th Field Hospital one (1) anesthetist and another officer of one of the Auxiliary Surgical teams were wounded. The Tec 3 was immediately attached to this platoon and acted as the anaesthetist and technician until his own unit arrived on D f 10.

Blood. The supply of blood has been satisfactory although there was some wastage in the first days of the campaign due mainly to the small number of casualties. Fifteen (15) units were used on D-Day, sixty (60) units were used on D f 1, and two hundred fifty-five (255) units were delivered to four (4) platoons of the two (2) Field Hospitals and one (1) Evacuation Hospital (93rd) on D f 3. Thus, in the initial phases there was a waste of about six hundred forty (640) units of blood. Transfusions given were 19,632, and patients transfused, 8,500 plus. In the Field Hospitals the average was 3.5 ---four (4) units of blood per patient transfused ---and in the Evacuation Hospitals the average was 2. ---2.5 units of blood per patient transfused. "Unit" 600 ccs, about 1.25 pints,

Penicillin and Sulfonamides. Penicillin, in that it has largely replaced the sulfonamides, has been used to a very great extent. Its value in the anaerobic infections seems to be great, particularly in the anaerobic streptococcus group. Under the protection of penicillin the scope of surgery has been considerably extended so that regardless of the time between wounding and surgery, thorough debridement of wounds may be performed without fear of spread of infection, and with the assurance that the wounds will remain clean and will be ready for early closure, including compound fractures of the long bones. Under local and general penicillin therapy wounds of the knee joint have responded especially favorably to debridement and closure of the capsule, even in the presence of early suppuration. Not only many knee joints, but many legs are being saved by careful surgery and use of penicillin. A policy has been pursued whereby all patients admitted to Field and Evacuation Hospitals, except

those with slight wounds, are started on penicillin therapy immediately upon admission to the hospital. At the time of operation the surgeon then decides whether penicillin is to be continued, sulfa drugs are to be substituted, or both given. Over 100,000 ampoules of penicillin have been administered in the Field and Evacuation Hospitals.

Infection has been a minor problem so far. There have been only ninety-three (93) cases of **gas** gangrene in American troops. Based on the Battle Casualty and Injury admissions, this is at the rate of about three (3) per thousand. There have been no cases of tetanus in U. S. troops.

Eyes. Wounds of the eyes have necessitated removal in eighty-five (85) cases in all categories, U.S. troops, Allied troops, and POW's. In only a **very** few instances has there been complete loss of vision.

Major Amputations. There have been five hundred forty-eight (548) amputations of the **arm or leg** performed up to the end of December, one (1) per **three(3)** wounded and injured. Very **few** have lost both arms.

Mortality. Up to 31 December 1944 the mortality rate of the Battle Casualties and Non-Battle injuries admitted to Seventh Army Hospitals was about **two (2)** per cent.

Field Hospitals and Auxiliary Teams. Units of Field Hospitals operated in conjunction with the Division Clearing Stations, usually within litter-carrying distance. Each unit accommodates up to sixty (60) patients, and as a rule they have a 25-40 patient census. Non-transportable patients are admitted directly to these units from the Clearing Stations. This group of patients comprises those suffering from continuing severe hemorrhage, wounds of the abdomen, severe wounds of the chest, multiple major fractures, traumatic amputations and those needing immediate resuscitation with blood transfusion before further transport. Head cases stand transportation to the Evacuation Hospitals very well. If after resuscitation it is considered safe to send the patient **back** to an Evacuation Hospital, nothing further is done in the Field Unit. The surgery and care in Field Hospitals was carried out by teams of trained and experienced surgeons temporarily attached to these hospitals by an Auxiliary Surgical Group, which controls a **number** of such teams: General Surgery, Thoracic, Neuro-Surgery, Orthopedic, Maxillo-Facial, and Shock. This is a Theater reserve unit, whose function is to supplement the surgical service of the hospitals. About eighty (80) per cent of their employment has been in the management of the desperately **wounded**, who require major surgery-at the most forward hospital. Most of the teams with Seventh Army have functioned since 8 November 1942 in Africa, Sicily, Italy, and France. The above were teams of the Second Auxiliary Surgical Group. During November these

were augmented by a detachment from the First Auxiliary surgical Group.

Equipment. The teams are equipped with all essential items of surgical instruments and an anesthesia apparatus. Tentage for quarters is a part of their organic equipment. They are not self-sustaining, and are dependent upon the installation in which they are working for messing and housekeeping facilities.

Transportation. Teams have their own transportation. Its quantity is very limited, and when employed in evacuation hospitals is often withdrawn to furnish additional transportation to teams employed in platoons of field hospitals.

All teams of the Second Auxiliary Surgical Group landed uneventfully on D-Day and D + 1 with the exception of three (3) officers and two (2) enlisted men, who were wounded, one (1) seriously, when the half track personnel carrier they were riding struck a land mine. The teams treated seriously wounded casualties immediately after the initial landings and moved rapidly forward with the hospitals to which they were attached.

The following figures represent a classification of wounded admitted to Medical installations for period ending 31 December 1944:

TECHNICAL DATA.

Classification of Wounds:

U.S. Army.

	<u>Patients Admitted</u>	<u>Deaths</u>
Abdominal	1,765	201
Thoraco-Abdominal	200	24
Thoracic	3,402	108
Maxillo-facial	2,406	10
Neurologic	481	1
Head	3,239	157
Spine	477	18
Nerve	105	1

	<u>Patients Admitted</u>	<u>Deaths</u>
Extremities		
Upper	12,809	11
Lower	17,549	62
other	3,843	34
Total	46,356 ✓	627
Number of Patients Admitted with Multiple Wounds	46,296 14,431	137
Battle Casualties Caused By:		
Bullets		
Unclassified	2,065	23
Rifle	2,930	15
Machine Gun	886	9
High Explosives		
Unclassified	14,619	58
Rifle	1,349	16
Shell	2,670	41
Mine	924	14
Booby Trap	23	0
Bomb	192	0
Blast (Concussion-type Injury) . .	832	2
Cutting; Instrument (Knife, Bayonet, etc.)	20	0
Total	26,480	178
Number of Patients with Self-inflicted Wounds:		
Firearms	390	0
Explosives	4	0
Cutting Instruments	5	0
Total	399	0

	<u>Patients Admitted</u>
Amputations :	
Arm	71
Forearm	40
Leg	316
Thigh	<u>162</u>
Total	589

injuries to Major Arteries:	<u>No—</u>	<u>Amputations</u>
Carotid	2	0
External Carotid	1	0
Axillary	27	5
Brachial	69	11
Radial	21	1
Ulnar	10	0
Radial and Ulnar	9	3
Aorta	2	0
Renal	2	0
Femoral	75	38
Superficial Femoral	14	9
Profunda Femoris	10	0
Popliteal	76	53
Anterior Tibial	56	2
Posterior Tibial	58	3
Anterior and Posterior Tibial	17	12
Inferior Mesenteric	1	0

	<u>No.</u>	<u>Amputations</u>
Internal Mammary	1	0
External Iliac	1	0 .
Subclavian	3	1
Not Stated	111	27
Total . .	565	165
Eye Enucleations	95	
Anaerobic Infections	133	
Burns	330	

SANITATION AND HEALTH.

Following landing operations sanitary problems continually arose that required very close supervision by a representative of the Army Surgeon.

The rainy weather and impervious nature of sub-soil lowered the efficiency of latrines and soakage pits and caused much mud in bivouac areas. These complications were ameliorated somewhat by frequent changing of latrine sites and soakage pits, disposal of waste water by ditches and nearby streams, selection of high spots for location, extensive ditching of areas and generous use of gravel for roads and walks.

Where dishware other than mess kits was used there was a lack of appreciation of the fact that washing in soap and water, and rinsing in hot water of unknown temperature does not result in sterilization. In such instances emphasis was placed on a final one-minute dip in boiling water, or a thirty-second rinse in hot water containing Mikrokylene (germicidal rinse). Mess kit sanitation has been constantly brought before the minds of the troops, and kitchen workers are continually informed in the proper methods of preparing water for washing and rinsing mess kits. In general the sanitary standards in this respect have been satisfactory.

On a few occasions several units have gone out of their way in an effort to convince themselves that available municipal water was potable. They seemed willing to base their opinion on the mere fact that civilian authorities stated the water was potable. In these instances units were informed that water could not be considered as potable unless treated according to Army standards and they were directed to abide by current publications and directives.

Disease outbreaks of unusual interest have been as follows:

1. Pappataci Fever: Thirty-three (33) cases were admitted to the 27th Evacuation Hospital in Southern France between 1 September and 20 September. Sixty per cent (60%) of the cases occurred in one (1) unit. The movement of the troops northward and the advent of colder weather terminated the outbreak.

2. Acute Conjunctivitis: A transient type of conjunctivitis occurred among troops while in Southern France. Ophthalmologists treating such cases considered them as non-infectious. Individuals exposed to the wind and dust, such as truck-drivers and motorcyclists, were the most commonly affected. It was thought that some chemical in the dust from roads may have been responsible. No such cases have been reported in northeastern France.

3. Amoebiasis: An outbreak occurred among the personnel of the 11th Evacuation Hospital. A stool survey was made and all positive cases placed under treatment. More careful attention was given to sanitation, particularly in the messes.

4. Diarrhea: In the month of December a large number of cases of a generally mild type of diarrhea occurred which were widely distributed among Seventh Army troops. In some instances the diarrhea was preceded by upper respiratory symptoms, and in other cases it seemed to be spontaneous. The spread of the infection could not be correlated with contaminated water, food, or improper sanitation of mess equipment. Bacteriological analysis of one hundred eighty-seven (187) diarrheal stool specimens from U.S. Army patients performed by the 1st Medical Laboratory revealed the following in twenty-seven (27) positives:

Flexner	I	.	.	.	.	.	.	.	1
"	II	:	:	.	.	.	.	:	4
"	III	:	:	.	.	.	.	:	3
"	IV	.	.	.	.	.	.	:	2
"	V	.	.	.	.	.	.	:	9
"	VI	.	.	.	.	.	.	:	1
Boyd	274	.	.	.	.	.	.	:	1
S. Ambigua		.	.	.	.	.	.	:	4
Sonnei		.	.	.	.	.	.	:	2
									<hr/>
Total									27

If this outbreak were bacillary in etiology, it could be expected that the per cent of positives would be much higher than fourteen per cent (14%). During a bacillary dysentery outbreak in North Africa in 1943 more than fifty per cent (50%) of the stools were positive regardless of the fact that the rectal swab technique was not used in obtaining cultures. Furthermore, the incidence of blood and pus in the stools was low. It would appear that during this outbreak true cases of bacillary dysentery were occurring, but the majority of the cases were of a different etiology, possibly a virus.

An outbreak, similar in character to the one now found in Seventh Army, had been studied during Louisiana maneuvers in 1942. There also, the lack of bacteriological findings from stools of patients was an outstanding feature. The epidemiological picture there also suggested a more direct type of transmission as it did in the present outbreak.

From observations made during these two outbreaks the possible existence of a virus with both pneumotropic and enterotropic characteristics would have to receive consideration. Because of the commonly occurring pneumotropic characteristics, probably a name such as "Epidemic Respiratory - Enteric Disease" would be reasonably descriptive.

Malaria, as had been expected, proved to be of no concern in this campaign, but preventive and suppressive measures were continued until 11 October and were then discontinued as being of no further practical value.

With the cooperation of the Quartermaster and the improvement in transportation facilities, a continuous and distinct improvement was noted in the quality and quantity of rations. Vitamin supplements were supplied to *those* troops needing such a supplement to their diet. This was confined mostly to troops in the line where the diet consisted chiefly of "C" and "K" rations.

Sick call for units having no medical officer has been provided in the following ways:

1. By informally attaching the units to nearby organizations with medical detachments. .
2. By setting up centrally located Seventh Army dispensaries for this purpose. This method has proven to be the most satisfactory and efficient.

It was found that reinforcements were not being housed in satisfactory quarters, and were not supplied with sufficient heat, bathing facilities, or winter clothing, and were given no priority on food. Recommendations for improving this situation were made to the Assistant Chief of Staff, G-1, and an immediate improvement was noted. These conditions require first-hand consideration as they have a very definite bearing on the physical well-being and morale of reinforcement personnel.

Trench Foot has, and continues to be an outstanding problem, and though every possible procedure has been invoked in an attempt to reduce this condition to its lowest possible level, cases *show* a continuing increase.

By coordinated effort education of the troops in the prevention of Trench Foot is being carried out in the 2G Convalescent Hospital, Reinforcement Depots, the Divisions, and by Seventh Army Radio Station. Printed instructions are continually being distributed to the individual soldier, and informal talks and demonstrations are being given whenever and *wherever* possible.

Sock exchange has been established in the Divisions with the aim of supplying each man with a pair of clean, dry socks each day. Battalion Aid Stations are used as points where men may obtain warmth, dry their feet, and put on clean socks. The fact has been realized that it is a command function to see that the men are supplied with the facilities for care of the feet and that they follow accepted preventive measures.

There has been excellent cooperation by the Quartermaster in providing winter footwear and other winter clothing as rapidly as possible.

VENEREAL DISEASE.

At the beginning of the campaign it was noted that cases of venereal disease requiring treatment were not only the result of contacts made in France but also a back-log of cases which had their source in Italy. In order to care for these additional cases it was necessary to expand the capacity of the Army VD Hospital (Provisional) from the originally-planned two hundred and fifty (250) beds to three hundred and seventy-five (375) beds, and to maintain a twenty-four (24) hour continuous schedule.

The personnel consisting of eight (8) officers and ninety-three (93) enlisted men necessary to operate the hospital were secured from the 616th Clearing Company of the 181st Medical Battalion. 18 August the VD Center opened for operation near the town of Le Luc, France. Instructions were given personnel as to what was required of them and the specific policies they were to follow in diagnosis and treatment.

In the pre-invasion plans it had been decided that serological examinations for the Center would be made by the nearest evacuation hospital, and only slide end dark field examinations would be completed at the VD Center.

Because of the rapidity of the campaign and the frequent changes of location necessitated, this proved impractical. To meet this situation a medical laboratory officer and two (2) technicians were borrowed from the 1st Medical Laboratory and flown to Southern France from Maples, additional blood serology equipment was secured and two (2) days later Kahn determinations were being made.

Originally, all cases of gonorrhea and syphilis were to be treated with penicillin. However, a large supply marked for this operation was found to be contaminated. This necessitated a delay in instituting penicillin treatment for syphilis, and it was, therefore, necessary to continue the use of Mapharsen and Bismuth until 28 August, when a new and adequate supply of penicillin arrived.

In some instances units located great distances from the VD Hospital, or units whose operations prevented evacuation of patients to the rear, were permitted to initially treat their gonorrhea cases with sulfonamides. Patients who failed to respond to one course of this treatment were sent to the VD Center and treated with penicillin.

The rate of cure from using sulfa drugs in the units was approximately forty-five (45) per cent, while that of penicillin was close to ninety-seven (97) per cent. This high incidence cure as compared with other installations treating gonorrhea with penicillin may be explained by the fact that normal saline is used to dissolve the penicillin, and buttock injections are never used. In earlier experiences (North Africa) with penicillin being dissolved in distilled water and injected in the buttocks, it was found that patients did not respond as satisfactorily as those receiving normal saline in the deltoid and vasti muscles.

prophylactic aid stations were set up wherever needed and all units with medical detachments gave prophylactic treatments in their dispensaries.

During July, 1,291 new cases of venereal disease were reported in Seventh Army, ninety-five (95) per cent of which originated while the troops were staging in Italy. The following figures show the progressive decrease in venereal disease since that time:

<u>Month</u>	<u>Total Cases</u>	<u>Rate per 1,000 per Annum</u>		
		<u>White</u>	<u>Colored</u>	<u>Combined</u>
July	1,291	130.	222.	133.
August	876	87.	210.	95.
September	707	62.	142.	66.
October	531	52.	177.	56.
November	392	23.	87.	25.
December	464	17.	142.	23.

There have been a number of factors responsible for the decline in the incidence of this disease:

1. Seventh Army Education Program carried out by individual units.
2. The "Off-Limits" status of known houses of prostitution being rigidly enforced has decreased the number of easy contacts.
3. More units are emphasizing the importance of immediate prophylactic treatment after contact.
4. Effect of an unusual series of photographs depicting the various types of venereal disease. (Many favorable comments have been received from unit commanders and medical officers regarding the impression left with the men following the showing of these photographs).
5. General unfriendliness of the people in the areas being entered.

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HOSPITAL & QUARTERS

CASES FOR THE THIRTY WEEK PERIOD 1 JANUARY TO 29 JULY 1944

PATIENTS

ADMISSIONS

	<u>Disease</u>	<u>Injury</u>	<u>Battle Casualty</u>	
	14487	1759	46	16292

PATIENTS

DISPOSITIONS

	<u>Disease</u>	<u>Injury</u>	<u>Battle Casualty</u>	<u>Total</u>
Duty	7542	751	43	8336

DIAGNOSES		CASES REMAINING FROM LAST REPORT	CASES ADDED SINCE LAST REPORT			CASES DISPOSED OF SINCE LAST REPORT	CASES REMAINING UNDER TREATMENT	DEATHS FROM COMMUNICABLE DISEASES
			(5) By Direct Adm., Informal Tr., & Ch. of Diagnosis		By Formal Tr., or Disposition as contained in			
			TOTAL (4)	in-hospital (3)				
DISEASES	43 *Common respiratory diseases	55	817	1	587	1450	9	
	44 *Epidemic typhus	15	8		47	70		
	45 *Influenza		29		5	52	2	
TRANSMITTED	46 *Measles							
	47 *Measles, German				3	3		
BY	48 *Meningitis, meningococcal		4		2	6		
	49 *Mumps	1	15		5	21		
DISCHARGES	50 *Pneumonia, primary (not atypical)	5	41	1	196	242		
	51 *Pneumonia, primary atypical		8		1	9		
OF THE	52 *Pneumonia, secondary	1	1		2	4		
	53 *Scarlet fever				1	1		
RESPIRATORY	54 *Septic sore throat		6			6		
	55 *Tuberculosis, all forms	1	2		3	6		
TRACT	56 Vincent's angina		2		4	6		
	57 Bacterial food poisoning		15			15		
	58 *Common diarrhea	13	386	3	117	498	18	
	59 Dysentery, bacillary	2	66		3	64	7	
INTESTINAL	60 Dysentery, amoebic		10	1		10		
	61 Dysentery, unclassified	9	64	1	17	86	4	
DISEASES	62 *Dysentery, unspecified	17	1		15	33		
	63 *Typhoid fever	6	1		3	10		
	64 *Dengue							
	65 *Filariasis							
INSECT-BORNE	66 *Malaria acquired in U.S.							
	67 *Malaria acquired outside U.S.	54	612	205	386	1045	7	
DISEASES	68 *Cholera							
	69 *Typhus fever							
	70 *Sandfly fever							
	71 *Hepatitis, infectious		10		2	8	4	
	72 *Hemorrhagic fever		63		3	65	1	
	73 *Scarlet fever							
MISCELLANEOUS	74 *Scarlet fever		83	5	9	90	2	
	75 *Polioencephalitis, acute anterior							
DISEASES	76 *Polioencephalitis, acute anterior	1	3	1	4	8		
	77 *Scabies	1	25		39	65		
	78 *Tetanus							
	79 Fever of undetermined origin	27	2393	2	657	3088	9	
VENEREAL	80 Gonorrhea	168	822	79	791	1781		
	81 Syphilis	14	68	8	128	210		
DISEASES	82 Other venereal	6	92		85	183		
	83							
	84							
SPECIAL	85							
	86							
NOT LISTED	87							
	88							
	89							
TOTAL	90							

Due to the static role of the Seventh Army for the 30 week period, 1 January 1944 to 29 July 1944, only one consolidation is shown. Rates per 1000 per annum are not computed. The mean strength of the Seventh Army during the above period was relatively small and it is not considered that the rates would reveal a true trend of the Communicable Diseases.

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HOSPITAL & QUARTERS

CASES AND RATES PER 1000 PER ANNUM FOR THE FOUR WEEK PERIOD ENDING 26 AUGUST 1944

MEAN STRENGTH FOR THE PERIOD 117337

PATIENTS

ADMISSIONS

Disease
patients RatesInjury
Patients RatesBattle Casualty
Patients RatesTotal
Patients Rates

2167 904.82

1243 137.71

2678 296.70

12038 1339.23

PATIENTS

DISPOSITIONS

Disease

Injury

Battle casualty

Total

Duty 1487

337

201

2021

Evacuated to Base 1283

236

1690

3209

RATES

DIAGNOSES	CASES REMAINING FROM LAST REPORT (1)	CASES ADDED SINCE LAST REPORT				CASES DISPOSED OF SINCE LAST REPORT (5)	CASES REMAINING DURING TREATMENT (6)	DEATHS FROM COMMUNICABLE DISEASES (7)
		(3) By Direct Adm., Informal Tfr. & Ch. of Diagnosis & Treat.		(4) By Formal Tfr., if Disap. on those is concurred in				
		(a)	(b)	(c)	(d)			
40 Common respiratory diseases	9	(500)		169	620	58		55.40
41 Diphtheria								
42 Influenza	2	21		4	26	1		
43 Measles								
44 Measles, German								
45 Meningitis, meningococcal		1			1			
46 Mumps		4		2	5	1		
47 Pneumonia, primary, not atypical		8		5	10	1		
48 Pneumonia, primary atypical		11		3	11	3		
49 Pneumonia, secondary								
50 Scarlet fever								
51 Septic sore throat		3			2	1		
52 Tuberculosis, all forms								
53 Vincent's angina		5			4	1		
54 Bacterial food poisoning		3			2			
55 Common diarrhea	18	(222)		61	275	26		24.60
56 Dysentery, bacillary	7	27		1	35			
57 Dysentery, amebic		5		2	7			
58 Dysentery, unclassified	4	38	3	1	42	1		
59 Paratyphoid fever								
60 Typhoid fever								
61 Dengue								
62 Filariasis								
63 Malaria acquired in U.S.								
64 Malaria acquired outside U.S.	7	(831)	123	738	1328	248		92.07
65 Relapsing fever								
66 Typhus fever								
67 Sandfly fever	4	28		21	52	1		
68 Hepatitis, infectious	1	(43)	1	39	78	5		4.76
69 Leishmaniasis, infections								
70 Mycotic dermatoses	2	68			70			
71 Folliculitis, acute anterior								
72 Rheumatic fever		1			1			
73 Scabies		10		7	15	2		
74 Tetanus								
75 Fever of undetermined origin	9	1820	1	852	2524	157		
76 Gonorrhea		(504)	74	95	574	25		55.84
77 Syphilis		(18)	1	4	21	1		1.99
78 Other venereal		(88)	2	240	105	203		7.52
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
94								
95								
96								
97								
98								
99								
100								
TOTAL								

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HOSPITAL & QUARTERS

CASES AND RATES PER 1000 PER ANNUM FOR THE FIVE WEEK PERIOD ENDING 30 SEPTEMBER 1944

MEAN STRENGTH FOR THE PERIOD 127029

PATIENTS

Disease
Patients Rates

12124 992.59

ADMISSIONS

Injury
patients Rates

2386 195.34

Battle Casualty
patients Rates

5338 439.07

Total
patients Rates

19873 1627.00

PATIENTS

Disease

Duty 7437

Evacuated to base 1787

DISPOSITIONS

Injury

1033

463

Battle Casualty

763

2919

Total

9283

5168

RATES

DIAGNOSES	CASES REMAINING FROM LAST REPORT	CASES ADDED SINCE LAST REPORT				CASES DISPOSED OF SINCE LAST REPORT	CASES REMAINING FROM TREATMENT	DEATHS FROM COMMUNICABLE DISEASES
		(1) Total	(2) By Direct Adm. Informal Tr. & Ch. of Outpatients & of Diagnosis-Therein is covered in (3)	(3) By Formal Tr.	(4) By Diagnosis-Therein is covered in (3)			
33 common respiratory diseases	58	(820)	1	493	1255	116		67.13
43 diphtheria			1		1			
44 influenza	1	39		7	41	6		
45 measles								
46 scarlet fever								
47 meningitis, meningococcal				5	5			
48 typhoid	1	2		1	4			
49 pneumonia, primary (not atypical)	1	8		7	11	5	1	
50 pneumonia, primary atypical	3	18		9	29	1		
51 pneumonia, secondary		4			4			
52 scarlet fever								
53 septic sore throat	1	2			3			
54 tuberculosis, all forms				3	3			
55 Vincent's angina	1	5		4	9	1		
56 bacterial food poisoning								
57 common diarrhea	26	(675)	4	365	977	89		55.26
58 dysentery, bacillary		8		4	10			
59 dysentery, amoebic		15		20	31	4		
60 dysentery, unclassified	1	37	1	36	71	3		
61 shaggyhead fever								
62 typhoid fever								
63 dengue								
64 filariasis								
65 malaria acquired in U.S.								
66 malaria acquired outside U.S.	248	(1803)	336	2028	3795	284		147.51
67 malarial fever								
68 typhus fever								
69 scrub typhus	1	35	1	10	46			
70 hepatitis, infectious	5	(139)	4	195	330	9	1	11.38
71 leptospirosis, infectious		1			1			
72 erythema multiforme		96			96			
73 cellulitis, acute anterior								
74 diphtheria								
75 scarlet fever	2	64		71	122	15		
76 typhoid fever								
77 typhus								
78 fever of undetermined origin	157	1988	1	1442	3408	179		
79 gonorrhea	25	(916)	163	289	1172	38		74.99
80 syphilis	1	(290)	14	37	338			23.74
81 other venereal	203	(330)	57	692	1099	126		27.92
82								
83 Gas Gangrene		(1)			1			.08
84					Duty			
85 Trenchfoot		(239)			23			19.57
86								
87								
88								
TOTAL								Trenchfoot totals obtained Reports.

Trenchfoot totals obtained from A & D Reports.

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HOSPITAL & QUARTERS

CASES AND RATES PER 1000 PER ANNUM FOR THE FOUR WEEK PERIOD ENDING 28 OCTOBER 1944

MEAN STRENGTH FOR THE PERIOD 120864

PATIENTS

Disease	Patients	Rates
	10345	1112.60

ADMISSIONS

Injury	Patients	Rates
	1670	179.61

Battle Casualty	Patients	Rates
	5247	564.32

Total	Patients	Rates
	17262	1856.53

PATIENTS

Disease	Patients	Rates
Duty	5239	
Evacuated to Base	3846	

DISPOSITIONS

INJURY

669
802

BATTLE CASUALTY

1053
5256

TOTAL

6961
10004

RATES

DIAGNOSES	CASES REMAINING FROM LAST REPORT	CASES ADDED SINCE LAST REPORT			CASES DISPOSED OF SINCE LAST REPORT	CASES REMAINING UNDER TREATMENT	DEATHS FROM COMMUNICABLE DISEASES	
		(5) By Direct Adm., Informal Tfr., & Ch of Diagnosis & Treatm.		By Formal Tfr., If Disposed on Those As Reported in				
		(1)	(2)		(3)	(4)	(5)	(6)	(7)
40 Common respiratory diseases	116	(1447)		675	1966	272		155.62
41 Diphtheria		1		1	1			
42 Influenza	6	59		22	60	7		
43 Measles		1		1		2		
44 Measles, German								
45 Meningitis, meningococcal		2				2		
46 Rubella		6		2	6			
47 Typhus, primary (not atypical)	5	23		15	34	9		
48 Typhus, primary atypical	1	19		21	28	13		
49 Typhus, secondary		1				1		
50 Scarlet fever				1		1		
51 Septic sore throat		2			2			
52 Tuberculosis, all forms		5		7	12			
53 Vincent's angina		1		3	4			
54 Bacterial food poisoning		1			1			
55 Common diarrhea	89	(485)	7	351	773	152		52.16
56 Dysentery, bacillary		2			2			
57 Dysentery, amoebic	4	21			76	9		
58 Dysentery, unclassified	3	19		20	40	2		
59 Paratyphoid fever								
60 Typhoid fever								
61 Dengue								
62 Filariasis								
63 Malaria acquired in U.S.								
64 Malaria acquired outside U.S.	264	(995)	415	677	1744	212		107.01
65 Malaria, malarial fever								
66 Typhus fever								
67 Sandfly fever								
68 Hepatitis, infectious	9	(226)	10	163	366	30		24.31
69 Spotted fever, infectious								
70 Mycotic dermatoses		29	2		29			
71 Polymyositis, acute anterior		1			1			
72 Rheumatic fever		3		2	5			
73 Scabies	15	128	3	90	212	21		
74 Tetanus								
75 Fever of undetermined origin	179	1057	1	520	1619	137		
76 Gonorrhea	38	(404)	134	106	495	53		43.45
77 Syphilis		(183)	16	36	202	17		19.68
78 Other venereal	126	(294)	54	516	861	75		31.62
79 Trenchfoot		(459)			Duty			49.37
					54			
*SPECIAL								
NOT LISTED								
TOTAL								

*Trenchfoot totals obtained from Reports.

*Trenchfoot totals obtained from A & D Reports.

WHITE & COLORD

HOSPITAL & QUARTERS

CASES AND RATES PER 1000 PER ANNUM FOR THE FOUR WEEK PERIOD ENDING 24 NOVEMBER 1944

MEAN STRENGTH FOR THE PERIOD 143188

ADMISSIONS

Injury

Patients Rates

3048 276.73

DISPOSITIONS

Injury

1255

1632

PATIENTS

Disease

10757 976.63

PATIENTS

Disease

4703

Evacuated to Base

Duty

7135

4703

Battle Casualty

1514

6087

Total

9954

12122

Patients Rates

19835 1800.82

Battle Casualty

547.46

6030

1514

9954

12122

12122

12122

12122

12122

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WHITE & COLORED

HOSPITAL & QUARTERS

CASES AND RATES PER 1000 PER ANNUM FOR THE FIVE WEEK PERIOD ENDING 29 DECEMBER 1944

MEAN STRENGTH FOR THE PERIOD 188324

PATIENTS

Disease
Patients Rates
15327 846.38

ADMISSIONS

Injury
Patients Rates
5210 287.69

Battle Casualty
Patients Rates
10063 555.68

Total
Patients Rates
30600 1689.7

PATIENTS

Disease
Duty 8672
Evacuated to Base 4660

DISPOSITIONS

Injury

1778
2100

Battle Casualty

1710
7546

Total

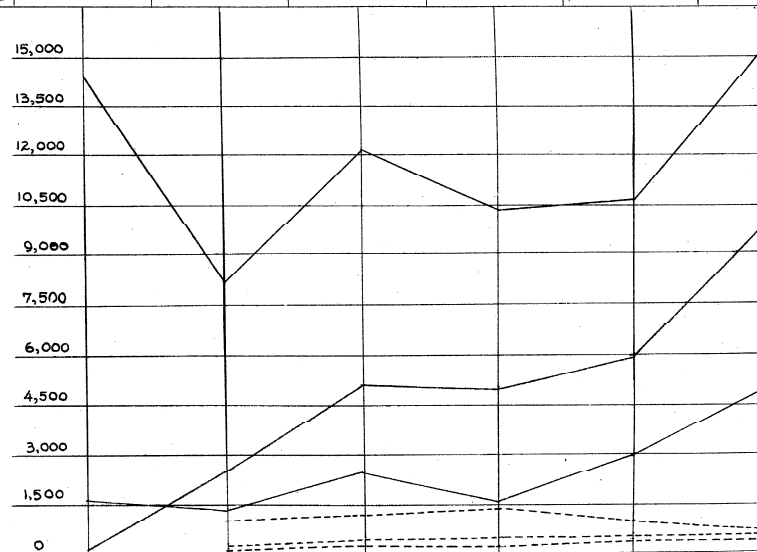
12150
15606

RATES

DISEASES	CASES REMAINING FROM LAST REPORT	CASES ADDED SINCE LAST REPORT				CASES DISPOSED OF SINCE LAST REPORT	CASES REMAINING UNDER TREATMENT	DEATHS FROM COMMUNICABLE DISEASES
		(5) By Special A.M., Informal Tfr. & Co. of Diagnosis & Tfr.		By Postal Tfr., if diagnosis without is occurred in	(6)			
		(1)	(2)					
43 Common respiratory diseases	273	(2245)	498	2605	411		123.97	
44 Syphilis	1	7		7	1			
45 Influenza	6	56	11	65	6			
46 Measles		1		1				
47 Measles, German								
48 Meningitis, meningococcal	2	5	2	7	2			
49 Mumps	1	1	1	2				
50 Pneumonia, primary, not atypical	14	160	33	160	47			
51 Pneumonia, primary, atypical	19	62	19	96	4			
52 Pneumonia, secondary		2		2				
53 Scarlet Fever	1	1		2				
54 Septic sore throat		3		3				
55 Tuberculosis, all forms		2	3	3	2			
56 Vincent's angina	2	15		12	5			
57 Bacterial food poisoning								
58 Common diarrhea	128	(1181)	366	1464	211		65.21	
59 Dysentery, bacillary	2	31	7	38	2			
60 Dysentery, amebic	1	38	1	37	3			
61 Dysentery, unclassified	2	78	22	89	13			
62 Paratyphoid fever	1	1		2				
63 Typhoid fever								
64 Dengue								
65 Filariasis								
66 Malaria acquired in U.S.								
67 Malaria acquired outside U.S.	96	(491)	134	229	733	85	27.11	
68 Relapsing fever								
69 Typhus fever								
70 Sandfly fever								
71 Hepatitis, infectious	34	(278)	9	38	328	24	15.35	
72 Enterococcal infection		1		1				
73 Mycotic dermatoses		2		2				
74 Polymyositis, acute anterior		2		2				
75 Rheumatic fever	1	7		7	1			
76 Scabies	19	157	7	204	22			
77 Tetanus								
78 Fever of undetermined origin	80	545	2	139	676	86		
79 Gonorrhea	48	(352)	105	4	381	23	19.44	
80 Syphilis	33	(107)	21		117	23	5.91	
81 Other venereal	24	(633)	504	29	608	85	35.23	
82 Gas Gangrene		(8)		8				
83 Immersion foot		(11)	6	17			.44	
84 Frostbite		(36)		27	9		.80	
85 Trenchfoot							1.98	
86 Trenchfoot		(2086)		282			115.19	
TOTAL							Trenchfoot totals obtained from A & D Reports.	

HOSPITAL AND QUARTERS CASES

MEAN STRENGTH		117,337	127,029	120,864	143,188	188,324
PERIOD	1 JANUARY-29 JULY	26 AUGUST	30 SEPTEMBER	28 OCTOBER	24 NOVEMBER	29 DECEMBER



CASES
 — DISEASE
 - - INJURY
 — BATTLE CASUALTY

RATES
 - - - -
 - - - -
 - - - -

6. More units committed to active combat.
7. Curfew hours, which limit the time a man has in which to make contacts.
8. The "Honor Roll" and the "Excessive Rate" letters which are distributed to the appropriate units and installations of Seventh Army.
9. The rapidity in which cured cases of venereal disease are returned from the VD Center to units, thus discouraging deliberate attempts to avoid hazardous duties by contracting venereal disease.

DENTAL SERVICE.

The dental health of the troops-who were engaged in the operation was well above average, except in the way of prosthetic requirements, which can be only classified as average. Prior to the operation a concentrated effort was made by all unit dental officers to bring their unit up to the highest standard of dental health possible. However, time and facilities would not allow for a complete prosthetic program.

All units reported an unusually low incidence of dental emergency cases on D-Day end in the following thirty (30) day period. This was due to a combination of several factors. Primarily the excellent oral health of the troops, the low casualty rate of the first sixty (60) days of the campaign, a fast moving army with little time for minor complaints, and the difficulty encountered by medical units in keeping apace with the combat troops.

Ninety per cent (90%) of the Division dental officers did not commence dental operations as such until after D + 15. In the meantime, officer's dental kits were utilized in the treatment of a few dental emergencies which appeared about D + 5. The emergency admissions pertained mainly to the treatment of a few Stomatitis Vincent's cases and an occasional tooth extraction. It was also during this period, and in many cases for several months longer, that fully fifty per cent (50%) of the dental officers in combat units were employed in a strictly medical capacity.

The major activities of dental officers during the first thirty (30) days of operations consisted of preparing Maxillo-facial casualties for evacuation and rendering emergency dental treatment.

During the month of August, Seventh Army troops suffered one hundred (100) Maxillo-facial casualties. In the period September and October, the number dropped to an average of seventy-five (75) each month. Of the battle casualties

receiving this type wound, the greatest number resulted from shell fragments, followed in order by gunshot, grenades, mines, bombs, and miscellaneous. This is stated in a very broad sense as detailed breakdowns of information concerning actual causes are not available.

In the second month of the campaign it was possible to begin prosthetic work and establish a routine dental service for a large percentage of the troops.

problems pertaining to lost, broken, or unserviceable dentures may be attributed to the following sources: patients losing dentures as a result of vomiting when seasick; sneezing when on night patrol; newly-inserted dentures which irritate and cause the patient to remove them from his mouth, resulting in loss or breakage.

Accurate figures are not available as to deliberate loss or breakage of dentures which would lead to evacuation from combat, but it is believed that the rate is highest just before and during amphibious operations.

All the new Divisions assigned to Seventh Army were issued Dental Chests 61 and 62 in order to provide prosthetic service in their respective Clearing Stations and plans were made to make up mobile dental units within the Division to serve their troops in a more efficient manner.

The Fifth Prosthetic Team, with truck and equipment, was made available to Seventh Army and assigned to the 2d Auxiliary Surgical Group, making a total of three (3) such teams operating. The Fifth was placed on duty with American troops supporting the First French Army.

New trucks and equipment were provided for the two (2) original teams of the 2d Auxiliary Surgical Group, and all three (3) teams were well fitted to render dental service.

The lack of adequately trained laboratory technicians is always a problem. For this reason stress has been placed on a training program, the main purpose of which is to assure an adequate number of trained laboratory technicians. However, this condition will continue to exist until provisions are made for adequate T/O vacancies and ratings.

PERSONNEL.

The prime function of the Personnel Section on the field army level is to make certain that all combat and supporting units are adequately staffed with Medical Department officers and enlisted men, so that proper medical care will be available at all times. As all reinforcements were directly controlled

by the Ground Force Replacement System and Theater representatives, a constant check and follow-up had to be observed to maintain particularly combat units at an efficient strength. The change in Theater jurisdiction through which Seventh Army passed after its landings in Southern France, made this problem very important, as the flow of replacements was for some time neither automatic nor satisfactory. For an interval period replacements were being furnished neither by the Mediterranean Theater of Operations nor by the European Theater of Operations, and army units were forced to function at dangerously low levels. Following integration with ETOUSA this situation was ameliorated towards the close of the year, and the quality as well as quantity of replacements improved. It is to be noted that there were still a significant number of replacements for combat unit detachments in the 30 to 35 year age group. While many of these proved satisfactory, experience with this army has shown that all medical replacements for the Infantry, Armored, or Airborne Divisions, should by preference be not over thirty (30) years of age. The requirement for a high degree of training in field medical practice has not been demonstrated. The larger portion of the medical replacements had not had prior specific field training, and yet were able to render efficient service after a short period of orientation with their new units.

The balancing of the professional staffs of the evacuation hospitals was of great importance and received specific attention. The older evacuation hospitals that had functioned in North Africa and Italy, fortunately were extremely well-staffed with professional talent and well-balanced in all professional considerations. The newer evacuation hospitals that arrived directly from the United States were quite poorly balanced in many respects, and not soundly enough constructed to permit their direct employment for their primary mission. The defects were primarily in the surgical staffs. In coordination with the Army Surgical Consultant such changes of the professional staffs were made as were necessary to produce a fully competent organization capable of complete independent action. Changes in the Medical Staff, Nursing Staff, and enlisted specialists, were also instituted where strengthening was required. An initial reluctance on the part of some unit commanders to institute changes of personnel that had accompanied the unit from the Zone of the Interior was rapidly dissipated as the improvement of the unit demonstrated itself.

The exposure of medical personnel to the hazards of combat for prolonged periods of time has as deleterious an effect upon them as upon the personnel of the actual combat arm. The actual physical danger and hardship with which they must contend cannot be exaggerated. This particularly applies to the officer and enlisted personnel of the Infantry and

Armored Medical Detachments serving in forward areas. The factors of fatigue and of mental as well as physical exhaustion become most significant, and efficiency falls, if the individual does not completely disintegrate. This personnel must be relieved of forward duty before this stage is reached, and must be exchanged with suitable personnel from units or areas further to the rear. Unfortunately this can be accomplished only to a limited degree within the Army sphere. All means at Seventh Army's disposal were employed to effect such relief, but the problem can only be handled effectively from an echelon higher than a field army. The European Theater of Operations has of recent date attempted to alleviate this circumstance by an exchange of medical personnel from the Army with the Communications Zone. The quota established limited this exchange to less than three-tenths of one per cent (0.3%) per month, and it is at once apparent that this was no solution of the problem at all. A definite time objective should be set for individuals ordered to these more hazardous assignments so that they will have the assurance that after a given number of months or years of such service they will have a less hazardous position to which they may look forward.

The absence from professional practice and professional contacts was an important problem for the medical officer with the separate unit detachments in both the combat and the service groups. The relative professional isolation of these officers over prolonged periods of time has a markedly deleterious effect unless the individual is possessed of unusual initiative or external assistance is offered him. The sense of being doomed perpetually to this limited type of practice affects in time the morale as well as the efficiency of the medical detachment, and has been repeatedly noted and commented upon. The issuance of circulars, bulletins, and informative letters, counteracts this to a degree, as do the irregularly-spaced medical meetings that were held. In the latter case, special care had to be taken to see that the smaller scattered units received adequate notification. The individual medical officers from the small units were encouraged to visit the Army hospitals, and, if possible, to make a regular practice of spending several hours during the day on the hospital wards. The hospitals accepted these officers, offered informal instruction at times on the wards, and gave the visiting medical officer cases for study or ward work. This plan has proven quite useful, subject to the tactical situation. The desirable solution to this problem would be the re-assignment of these officers after definite fixed periods of field service. However, a large measure of reassurance could be given to this group of officers by the statement of the aids that will be offered them for their professional rehabilitation upon the cessation of hostilities.

For the period which the Army was under the jurisdiction of the Mediterranean Theater of Operations there was a rotation

of personnel to the United States, while under ETOUSA there has been a policy of thirty-day (30) periods of leave or furlough in the United States under the term of "rest" and "recouperation". A proportionate number of medical personnel have profited under this system, and its benefits are well established. A definite problem has been presented, however, as the average period of absence from duty is three (3) months, and the Army thus was short the services of three times the average monthly quota filled by medical officers. This demanded special attention in the case where the single medical officer with a unit had been selected for this reward, and his departure would have left the unit without medical care. In all instances this was solved by temporary expedients and shifts of personnel within the Army on temporary detail, so that the maximum benefits of the policy might be realized.

Reorganization during the course of the year reduced the number of medical officers in many units, and markedly increased the number of administrative officers allowed. This was a commendable change insofar as it relieved medical officers of non-professional duties and made better utilization of their services. The medical officers rendered excess by reorganization were rapidly absorbed by attrition or reassigned to fill long-existing vacancies. The medical administrative officers were secured in most instances by direct commission. The main requirement was for administrative officers trained and qualified as assistant battalion surgeons for the Infantry and similar battalion detachments, and this was met by encouraging the combat units to select their most suitable non-commissioned officers, who had been tried and found satisfactory on the job, for direct commission. The results were most satisfying. On the whole, men commissioned for these assignments from combat-tried units proved more capable and efficient than those trained in schools in the Zone of the Interior and shipped as replacement or reinforcement officers.

During the amphibious assault against the coast of Southern France the major and unusual demands for medical personnel developed shortly after the landing. The actual requirements can never be completely predicted with accuracy, but the need was foreseen and provided for by having a significant number of the personnel of later-phase medical units come in to the Beachhead early, where they were held as a mobile pool under the direct control of the Army Surgeon. The medical officers and enlisted men served as attendants aboard many of the assault and assault-support ships, and as soon as the landings were effected they were gathered and held as the medical reserve for the variety of contingencies that arose. By the time the later-phased units arrived the requirements for their use as temporary expedients no longer existed, and they reverted to the control of their parent unit. This was considered a very efficient use, as it minimized the long waste period in the staging of later-phased

units so characteristic of amphibious operations, Fixed hospital personnel profited particularly by their opportunity to experience some of the problems of forward medical service.

The decoration of medical personnel) both enlisted and commissioned, has been most gratifying. The many decorations and citations for gallantry and bravery give ample evidence of the heroism of the Medical Department on the battlefield, and the service citations demonstrate recognition of the professional services being rendered to the Army.

The importance of adequate and intimate liaison with the General Staff as well as with Higher and subordinate Commands, has been repeatedly emphasized in all matters affecting medical personnel. Medical officers, in particular, are not item commodities, but individuals, each varying from the other, and the fullest exploitation of their abilities can only be accomplished when this is realized and practiced. The tendency that has been noted of late, even in certain medical echelons, to itemize and catalogue medical officers and then deal with them as letters and numbers instead of as individuals, is to be strongly deplored, as wasteful and neither in the best interests of the individual nor of the Medical Service.

As the basic enlisted strength of the Evacuation Hospitals was not adequate to permit them to function with great efficiency, it was found necessary to provide civilian employees for these units. During the winter months when the location of the Evacuation Hospitals in buildings materially increased the manual labor requirement this was particularly true. Each Evacuation Hospital had sixty (60) to eighty (80) civilians working for them when they were established and functioning, and at one time a 750-bed Evacuation Hospital was profitably employing as high as one hundred and twenty (120) civilians. Initially, these employees were paid from Medical Department funds, but in France the payment was assured by the French authorities on a reverse "lend-lease" basis.

ARMY NURSING SERVICE.

The nurses of the 10th, 11th Field Hospitals, the 11th, 93rd, 95th Evacuation Hospitals, and the nurses of the teams of the 2d Auxiliary Surgical Group, arrived on the invasion coast of Southern France on D f 4, 19 August 1944. Transported via U.S. Hospital Ships Ernest Kinds and Marigold from Naples to the invasion beaches of St. Raphael and St. Maxime, France, they were immediately taken to their respective units by trucks furnished by each hospital. By this time the drive, which had been so rapid, had required that the hospitals move much further inland than had been originally planned. For example, the nurses of the 10th Field Hospital had to travel thirty-five (35) miles inland to join their unit.

On D + 10, 25 August 1944, the nurses of the 9th, 51st, and 59th Evacuation Hospitals, arrived from Naples aboard the U.S. Hospital Ship *Arcadia* at St. Maxime, France. These nurses were taken to the site of the 51st Evacuation Hospital at Draguignan that same day, remained there over night, and the next morning those of the 9th and 59th were taken to their respective units. It was necessary by that time to travel approximately two hundred (200) miles inland to reach the most forward hospital unit; namely, the 9th Evacuation Hospital, which was at Beaumont, France. On D + 15, 30 August 1944, the nurses of the 27th Evacuation Hospital disembarked at St. Maxime, and proceeded from the landing benches to their site near Aix-en-Provence. All hospitals had been opened previously, and of course there was much work to be done immediately on their arrival. This was true of the first group arriving as well as the second group.

The movements of the 400-bed Evacuation Hospitals; i.e., 93rd, 95th, and 11th Evacuation Hospitals, and the two (2) Field Hospitals, were frequent and rapid, often placing a physical strain upon those nurses who did not have time to recuperate from a difficult trip before having to do duty. The movements of the 750-bed Evacuation Hospitals were somewhat different. As noted elsewhere in this History, their moves, while infrequent at that time, were long. The 9th and 59th Evacuation Hospitals moved by trucks from two hundred (200) to two hundred and fifty (250) miles, and on these moves the nurses were forced to travel in 2 1/2-ton 6 x 6 trucks. Due to transportation shortage the 27th Evacuation Hospital was delayed in moving from below Aix to Xertigny, France. Due to the great distance involved and since the railroads were in operation by this time, it was more expeditious to move them by rail. They arrived at Xertigny on 26 September 1944.

The 51st Evacuation Hospital in support of the 1st Airborne Task Force which was holding the right flank of the Seventh Army on the Franco-Italian Border, was not moved until Sixth Army Group assumed command of the Task Force. After a Station Hospital had been opened to care for those casualties this Evacuation Hospital was closed and again transportation difficulties delayed the movement of this unit. The nurses of this unit arrived by rail at the rail-head nearest the location of the Hospital, then at Vincy, France, on 8 October 1944. Meanwhile, further advances had been made and additional moves by the other hospitals had been in progress.

With the coming of winter, arrangements had been made to house the hospitals in buildings, and while there was a great variety of the quality of the housing facilities, by and large, the living quarters for the nurses during the winter months have been a distinct improvement over tents.

On 11 November 1944, one hundred and twenty (120) nurses of the 116th, 117th, and 132nd Evacuation Hospitals arrived at Epinal, France, via Hospital Train from Marseilles. Since their respective units were not at that time in operation, these nurses were placed on Temporary Duty with all functioning Field and Evacuation Hospitals except the 9th Evacuation Hospital, which was at that time preparing to move to a new location. After a short term of duty with the other Evacuation Hospitals, the nurses rejoined their respective units. The 116th received patients on 30 November; the 117th on 28 November; and the 132nd on 8 December, 1944. From the experiences gained in working with the older, experienced hospitals, many useful methods had been learned, which materially aided the operation of the newly-assigned Evacuation Hospitals.

The only other new hospital unit to come to Seventh Army during this period was the 57th Field Hospital, which was employed in the manner usual to the use of Field Hospitals by Seventh Army. This unit arrived in the Army Area on 19 November 1944. Twenty-one (21) nurses from 1st Auxiliary Surgical Group joined Seventh Army, and were placed under administration of the 2nd Auxiliary Surgical Group on 10 December 1944.

The total number of nurses in Seventh Army Area who arrived from Naples, Italy, is given below:

Assigned to Seventh Army Units	379
Attached to Seventh Army Units from General Hospitals	14
Attached to Seventh Army from 2nd Auxiliary Surgical Group	29
Total	422

On 31 December 1944 this number had increased as shown below:

Assigned to Seventh Army Units	506
Attached to Seventh Army Units from General Hospitals	24
Attached to Seventh Army Units from 1st and 2nd Auxiliary Surgical Group	49
Attached to Seventh Army (57th Field Hospital)	18
Total	597

Of the above nurses one (1) was permanently rotated to the United States, and two (2) were rotated on thirty (30) days Temporary Duty in the United States.

In commenting on the activities of the nurses it is important to note that the use of Field Hospitals by Seventh Army is to treat non-transportable casualties. The Field Hospital platoon is in the immediate vicinity of the Division Clearing Station, and thus movements of the seriously wounded patients are reduced to a minimum. Because of the serious condition of these patients a tremendous amount of nursing care is required. For this reason six (6) nurses per Field Hospital platoon is not and never will be sufficient. Consequently, it has been necessary to request additional nurses for temporary duty with Field Hospitals. Continental Advance Section has been most cooperative in furnishing as many as twenty-four (24) nurses at one time for duty in the Field Hospitals.

For the most part the teams of the Auxiliary Surgical Groups are working in the Field Hospitals. These nurses are on duty in the Operating Room, and thus, the nurses assigned or attached for duty with the platoons are free to do only the required bedside nursing. Equal credit must also be given to the nurses of the Evacuation Hospitals, for when these units are expanded and filled to capacity, the nurses frequently work as many as fourteen (14) consecutive hours in Surgery and on the wards.

Despite the long hours and arduous work done by the nurses, one may say in general that the health has been reasonably good. From 19 August 1944 to 31 December 1944 a total of 1,684 days were lost through illness of two hundred and thirty-eight (238) nurses, an average of three hundred and thirty-six (336) days per month. Of the two hundred and thirty-eight (238) nurses, only fourteen (14) were permanently lost from Army units. November was the worst month, with five hundred and forty-five (545) days lost. A total of seventy-five (75) nurses of the Command were ill during this month. It is felt that this increase was due to long hours of work, frequent moves by trucks, cold, wet weather while living and working in tents. During the month of December, with a decreased patient load, (which of course meant shorter hours of duty), and better living and working conditions, since they were now in buildings, there was a distinct decrease in the duty days lost through illness. It is worthy of comment that at this time passes to Paris of forty-eight (48) hour duration were inaugurated. Although one hundred and ten (110) nurses took advantage of this opportunity, transportation to Paris was by 2 1/2-ton 6 x 6 trucks. This was a long, hard, uncomfortable trip. However, at this time rail transportation was non-existing and the only transportation facilities were the above-mentioned trucks. It should be noted that at this time the weather was quite cold, which added to the discomfort of the trip. With all the drawbacks, these passes were an excellent morale factor for those anticipating the visit to Paris.

From 19 August 1944 to 1 January 1945 the following promotions were made:

From 2nd Lieutenant to 1st Lieutenant	. . . . . 86 ANC
	3 Dietitians
From 1st Lieutenant to Captain	. . . . . 5 ANC
From Captain to Major	. . . . . 1 ANC

During this period of time there were five (5) marriages.

Awards presented since landing in Southern France were as follows:

- One (1) Bronze Star
- One (1) Soldier's Medal

SUPPLY.

During the landing stages of the operation very few medical supplies were unloaded, and it was not until D + 3 that they began coming to the beaches in any appreciable quantities. The beach dumps were set up as planned and only once, change in location was necessary, this as a result of opening a port in St. Raphael, France, which was a short distance from where the landings had been made.

The majority of supplies that came in over the beaches were unloaded from the ships into DUKW's, brought ashore and delivered directly to the beach dumps, thus eliminating a great amount of unnecessary handling and preventing loss and breakage.

The methods of packing proved to be very satisfactory as a large part of the unloading from the DUKW's was done by hand and the size and weight of the packages saved much time and labor. Whenever possible a DUKW filled with a crane was brought into the dump area and used to unload heavy articles, such as oxygen cylinders.

As in other cases, transportation was the greatest problem to be overcome. When it became necessary to move supplies from one beach to another from the beach dumps to the advance detachments in the forward areas, the amount of vehicles allowed the Depot Company by the present T/E proved to be extremely insufficient. All the organizational vehicles of the Depot Company were in use with the advance detachments, and in order to move supplies between the beaches it was necessary to borrow transportation from other medical units in the vicinity.

The larger percentage of supplies that were moved to forward supply points from the beaches were carried in Depot organizational trucks making round trips night and day. Upon the inauguration of rail transportation, this condition was relieved to a great extent.

A few minor difficulties involving security cargo came up due to the failure of some ships' cargo officers notifying the Engineer units who were operating the beaches that such cargo was aboard. This cargo was being unloaded with the other supplies, whereas it should have been handled separately. This was remedied by keeping a constant check on ships coming in and by notifying the Engineers that such cargo was aboard so they could furnish a boat for a representative of the Beach Control Group or the Medical Dump to go out to the ship to see that these supplies were properly unloaded and to accompany them from the ship to the Medical Dumps.

Supplies for the French did not pass through the American Medical Dumps, being delivered directly from the ships to areas designated for the French. However, several times supplies destined for the French got into the wrong dumps causing some inconvenience due to the transportation problem. These matters were promptly worked out by representatives of the French and American Supply Agencies.

To insure an adequate supply of oxygen it was found that the best arrangement was to send empty cylinders to the Near Shore (Naples, Italy) by Hospital Ship, have them exchanged for full ones and returned by the first Hospital Ship coming back to France.

When Air Fields in France became available, supplies that were needed immediately were requested from the Near Shore by cable and shipped on the first available aircraft.

Property exchange between the Air Evacuation Unit of the Air Corps and the Army Evacuation Holding Unit was always very unsatisfactory. The Air Corps was never able to furnish suitable quantities of litters and blankets to effect this exchange. This not only depleted the supply of these items at the Air Evacuation Holding Unit, but produced a critical shortage all along the line of supply and evacuation. The situation was somewhat remedied by constantly checking with responsible officials of the Air Corps Evacuation Unit, but at no time was it satisfactory.

The French were having difficulties in keeping their medical depots up with their Army, and were therefore forced to requisition supplies from American Depots. This was clarified at conferences between French and American Supply representatives

and the French were given advice as to methods used in pooling organic Medical Department transportation and how to utilize it in moving depot stocks to forward areas,

At all times the advance elements of the Medical Depot Company established dump sites as close as possible to the front lines in order to make the supplies convenient for the combat troops and at the same time to set up a base dump in areas which would be easily accessible to Army Hospitals.

As the campaign progressed and the Base Section became able to establish Supply Depots in the rear area, the pressure on the Army Medical Depot Company was greatly relieved, particularly in the matter of transportation, as Base was now responsible for getting the supplies from the ports into the Army area.

NEURO-PSYCHIATRY.

The incidence of psychiatric casualties was very low during the first month of the campaign due to the light resistance and rapid advance. However, as the lines became stabilized the troops became increasingly subject to psychiatric breakdown. This situation was enhanced by the fact that the three (3) divisions which participated in the original landing in Southern France (the 3d, 36th, and 45th Infantry Divisions) were all divisions which had seen long combat service in Italy, Sicily, and Africa.

A special effort has been made to effect transfer of all psychiatric casualties to the Army Psychiatric Treatment Centers. This proved important in stopping the further evacuation of those casualties admitted to Evacuation Hospitals with medical or other non-psychiatric diagnoses (largely psychosomatic disturbances), but who were fundamentally true psychiatric casualties.

On D f 6 an Army Forward Treatment Center for Psychiatric casualties was set up and functioning. This consisted of the second platoon of the 616th Medical Clearing Company, with the Table of Organization augmented to provide for a total of eighty-five (85) enlisted men. Four (4) psychiatrists were attached for duty. Due to prior commitments it was not possible to organize and instruct this unit before the actual landing. It is highly desirable that such an installation be fully organized and trained for this special work before such a landing, and if possible that it arrive ready to function at the same time as the four hundred (400) bed Evacuation Hospitals. In this way adequate control, centralization of treatment, and high rates of salvage for duty of such cases as cannot be handled in Division Clearing Stations becomes possible.

Prior to D f 6 psychiatric casualties were handled in the

Beach Collecto-Clearing units, and subsequently, upon their arrival, by the division psychiatrists within Division Clearing Stations. Fortunately, all casualties were light, and therefore, the psychiatric case load was also light, a circumstance which made it possible to hold and salvage most of these cases.

Operating necessity dictated that one (1) Clearing Company furnish installations for both the psychiatric and venereal disease treatment centers. One (1) platoon was utilized for each of these purposes. The difficulties encountered in the provision or adequate personnel for two (2) such units from additional elements (Collecting Companies) within one (1) Medical Battalion make it appear more desirable that these two (2) special installations be formed from two (2) different Clearing Companies in two (2) different Medical Battalions. It is not considered advisable to operate a venereal disease and psychiatric treatment center within the same hospital area. The spatial separation which thus followed made administration of the two (2) platoons somewhat difficult. Autonomy of administration and operation for separate platoons operating provisional hospitals should be provided insofar as it is possible.

The Forward Psychiatric Treatment Center moved forward in the same echelon with the Evacuation Hospitals, and thus remained always in approximately the same relative position to the front.

The rapid advance during the first month of the campaign entailed frequent moves over long distances. Consequently, the problem of holding patients deemed fit for return to duty became troublesome. This was solved by processing as many patients as possible before each contemplated move, evacuating those unfit for further combat to the rear, and moving the remainder who needed further treatment, forward with the hospital. In this way the maximum number of salvageable soldiers could be returned to their units.

A further difficulty encountered was the dearth of adequately-trained psychiatric medical officers. Only three (3) such were available at the time of the landing. It therefore became necessary to utilize the psychiatrically-untrained medical officers assigned to the Clearing platoon. These were rapidly trained by the experienced attached psychiatrists. They have functioned in a most adequate and efficient manner. It has been found that medical officers with good fundamental training in internal medicine, and with an interest in the psychiatric problem can be easily taught the principles necessary to practice efficient psychiatry in the combat area. Supervision by formally trained psychiatrists of experience is necessary and assures the correct management of complicated or obscure psychiatric cases.

The lack of Table of Organization vacancies at the time for psychiatrists in Army hospitals made it necessary to attach

these officers to the provisional Forward Treatment Centers on a temporary duty status, usually from Base Hospitals. Later this difficulty was surmounted by assigning such officers to vacancies in Army hospitals and placing them on detached service with the Center. In any event it appears highly desirable to create a permanent Table of Organization and Table of Equipment for such Forward Treatment Centers for psychiatric casualties.

As the campaign in France wore on new divisions were added to Seventh Army. This made it advisable to set up a second Forward Treatment Center. Both platoons of the 682d Clearing Company were utilized for this purpose, thus avoiding the difficulties of the additional needed personnel, which had been encountered in the 616th Clearing Company. The 682d Clearing Company began operation as a psychiatric treatment center during the last week in October. It served troops in VI Corps while the 616th Clearing platoon served those in XV Corps.

It will be of interest to review briefly the main features of the policies followed in regard to psychiatric patients in Seventh Army. The policies were formulated from the experiences gained in this field in Fifth Army in Italy. From the start a realistic approach to such casualties is fostered in all medical personnel from the Battalion Surgeon through to medical officers and psychiatrists in Army hospitals. A discussion of this subject appears elsewhere. Principally, it is essential that true psychiatric casualties are carefully differentiated from those soldiers who are not sick, but attempt to avoid duty because of poor motivation or unwillingness. Division psychiatrists have performed highly creditably in all divisions in controlling the rate of psychiatric breakdown. A very large number of patients were held and returned to duty without leaving the division.--@ Through their efforts the salvage rate for psychiatric casualties is now much higher than it was in the early phases of the Italian Campaign, before psychiatrists were reassigned to divisions. Division psychiatrists have also performed highly useful service in indoctrinating Division medical personnel with a realistic and workable knowledge of the problem.

The Army Treatment Centers serve a dual purpose. They supplement the screening and treatment facilities available to the division psychiatrists, and thus augment the number of cases which can be salvaged for full duty. In addition they serve the most important function of beginning the rehabilitation of those cases who are unfit for further combat. It has been the aim of the psychiatric services in Seventh Army to remove symptoms as completely as possible in all cases who are to be evacuated further to the rear. Follow-up of these cases has shown that in most instances they are arriving in Base hospitals in good condition with relatively few symptoms, and ready for almost immediate re-classification for limited service and re-assignment.

It has been found that the most important point in the rehabilitation of these cases is rapid return to useful work. It has long been known that the soldier who breaks in combat has lost, either permanently, or at least for a long period, his ability to adapt himself to combat conditions and to continue to be able to serve efficiently under those conditions. In addition, however, he has suffered an impairment of his ability to accept responsibility or surmount difficulties even in normal life. When faced by these he is prone to experience an exacerbation of his former symptoms and his efficiency is greatly reduced. Long experience has shown that the disorder is not "cured" by mere removal from combat. Indeed, it tends to progress the longer it is allowed to persist untreated. Factors of secondary gain make their appearance, and symptoms become useful to the soldier as a means to avoid difficulty and evade responsibility. Consequently, symptoms should be removed as early as it is possible; reassurance as to the eventual favorable outcome should be given, and the soldier should be put to work in a regular assigned position at the earliest moment. Most of the soldiers in the group needing further evacuation are eager and willing to work, and their sense of guilt at having "given up", which is frequently present, provides an added potent stimulus to resuming work in a non-combat situation, and continuing to help further the war effort in some capacity. Repeated experiences both in France and in Italy have shown that this group is able both physically and mentally to do useful work in non-combat positions.

In Seventh Army an effort has been made to reassign some of these cases in non-combat positions within the Army, without re-classification. Since the number of vacancies in such positions is small, this has been possible in only a limited number of cases. All of these have given satisfactory service in the units to which they were assigned. It is thought that rehabilitation of these cases could be further hastened if re-classification powers were made available to Army installations. If psychiatric casualties could be reclassified within Army, such patients could be sent to Replacement Centers for re-assignment within a week of the occurrence of their disorder, in most instances. Excessive hospitalization, re-duplication of work, and needless occupancy of bed space in Base installations would be avoided, and the fundamental therapeutic aims facilitated.

Psychiatric case rates observed during the campaign in Southern France in Seventh Army have varied considerably from time to time. These rates are related first of all to the number of battle casualties, and under "ordinary" combat conditions, can be expected to run in the neighborhood of 10-15% of the total battle casualties. In addition they are influenced by the state of leadership within the unit, unit morale, the state of fatigue of the troops, their cumulative combat exposure, their mission, as well as by the weather, and by the type of terrain in which operations have to be carried out. Some of these relationships are depicted in CHARTS I and II, and in TABLES I and II.

CHART I shows the disposition of psychiatric casualties by division psychiatrists within division. The divisions have been divided into two (2) groups, three (3) "new" divisions: A, - the 44th Infantry Division, B, - the 103d Infantry Division, and C, - the 100th Infantry Division; and two (2) "old" divisions: A, - the 3d Infantry Division, and B, - the 36th Infantry Division. Of the new divisions, A was committed around 15 October, 1944 and B and C, around 15 November, 1944. Of the old divisions, A participated in the North African landings, in the Sicilian and Italian campaigns, and B was first committed at Salerno, and engaged in the campaign in Southern Italy, and on the Anzio Beachhead. Both made the initial assault in Southern France on 15 August 1944, and had been in almost continuous action since that time.

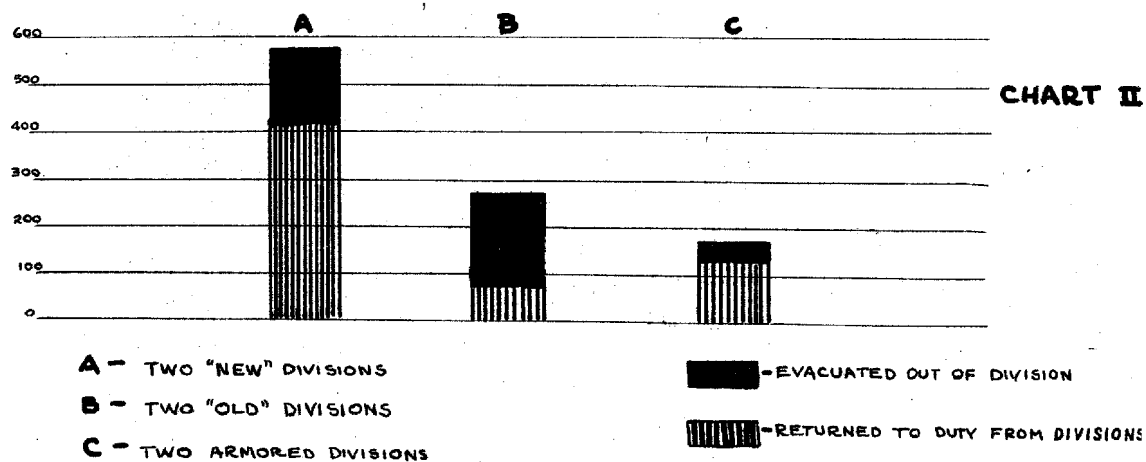
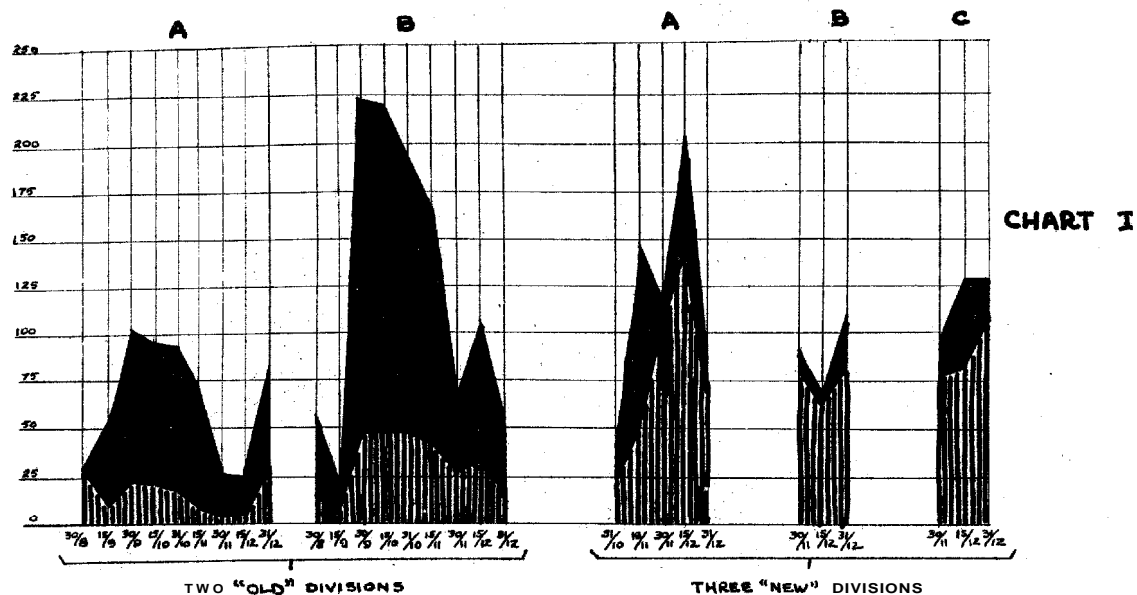
The first notable difference between the "new" and "old" divisions is the very much higher number of cases returned to duty in the "new" group. This may be laid primarily to the presence of fresh troops in the new as opposed to the large number of men with long combat exposure in the old divisions. It may be further explained by the differences in efficiency of forward screening in the two groups. In new divisions battalion surgeons are inexperienced in the correct diagnosis of true combat-induced psychiatric disorders, and have not yet learned that it is essential to hold every possible salvageable case at the aid station, and to return him to duty from there rather than to evacuate him further to the rear. In the old divisions these lessons have been learned through the pressure of necessity.

Still another reason for the higher duty returns from new divisions is to be found in their policy of screening out all soldiers of doubtful psychiatric status before leaving for overseas duty. This was made possible by the fact that division psychiatrists were assigned to and worked with these divisions for long period during their training.

A gain soldiers in the new divisions, having had little combat experience, developed milder disorders at this stage, and were therefore more effectively treated at division level.

The individual differences occurring between A, B, and C of the new group is probably secondary to variations in screening efficiency in forward echelons in these divisions.

In the old divisions, psychiatric case rates were very low from 15 August to 15 September 1944. During this period the enemy withdrew rapidly from Southern France, and our action consisted primarily of pursuit. During this time morale was extremely high, and most of the soldiers felt certain that the end of the war was near at hand. When opposition increased, in addition to the onset of inclement weather, and action took



RETURNS TO DUTY OF NP PATIENTS
FROM DIVISION CLEARING STATIONS
DECEMBER-1944

place in difficult terrain, after the middle of September, the cumulative fatigue of the soldiers in these divisions took its toll. In both of these divisions a large percentage of the psychiatric casualties occurred among men with the longest combat service. Such men cannot be salvaged either at division clearing stations, nor in Army Treatment Centers, and it is necessary to evacuate them for eventual reclassification. The low return to duty from clearing stations also reflects efficient screening by battalion surgeons.

The rather marked difference in case incidence in A and B of the "old" group (3d and 36th Infantry Divisions respectively) is due to a number of factors. Psychiatric casualties have always been consistently low in the 3d Division. This is presumed to have been due to the Division policy of exercising command control over the evacuation of exhaustion cases from the battle field. The Division requires that non-wounded soldiers obtain permission from their commanding officers before leaving to go to the Aid Station. Morale and unit pride have always been high in this Division.

Division B of this group (36th Division), had been subjected to severe losses in the Italian fighting, both at Salerno and again at The Rapido River. During the Campaign in France this Division suffered unusually high casualties among the officers of two (2) of its regiments. TABLE I below shows the relative incidence of battle casualties and psychiatric casualties in the three (3) regiments over the period 15 August through 15 December 1944:

TABLE I

<u>REGIMENT</u>	<u>Number of Battle Casualties</u>	<u>Number of Psychiatric Casualties</u>	<u>%NP NP NP/BC</u>
A	1,612	336	17.2
B	1,415	271	16.1
C	1,460	123	7.9

With the rapid turn-over of officers in regiments A and B, control of the incidence of exhaustion by command appears to have been hampered. Certainly a loss in morale and confidence must have been a further sequel to this unfortunate situation. Although battle casualties in the three (3) regiments were comparable, the percentage of psychiatric casualties was twice as high in regiments A and B as it was in regiment C. The relationship between leadership and psychiatric rates is clearly demonstrated.

It will be noted that in CHART I peaks for psychiatric casualties appear in both of the old divisions between 30 September and 15 November. These represent the break-down of the

many soldiers with prolonged combat exposure in these two divisions. By the end of November this group had been largely eliminated by evacuation and after this date the curves for the old and the new group of divisions become quite similar, with the difference that duty returns remained low in the old divisions.

TABLE II represents the results of a study made on cases evacuated from the 45th Infantry Division, the third of the "old" divisions which originally came to France with Seventh Army. The period covered is six (6) weeks. This Division has had long combat exposure in Sicily, Italy, and Anzio, before the Invasion of Southern France. It was staffed by experienced medical officers, and had an experienced division psychiatrist.

TABLE II

Total Time Spent in Combat
Before Evacuation for
Psychiatric Reasons

	<u>Number of Cases</u>	<u>Per Cent</u>
Less than one (1) month	9	3.
One (1) to three (3) months	43	15.
Three (3) to six (6) months	72	25.
Six (6) to eight (8) months	23	8.
Over eight (8) months	137	49.
Total	284	100.

Rank of Patients

Private	87	31.
Private, First Class	110	39.
Corporal, or Tec 5	18	6.
Sergeant, or Tec 4	33	12.
Technical Sergeant	5	2.
Staff Sergeant	31	10.
Total	284	100.

Combat Time versus Rank of Patient

	<u>than 1 Mo.</u>		<u>1 to 3 Mos.</u>		<u>3 to 6 Mos.</u>		<u>6 to 8 Mos.</u>		<u>Over 8 Mos.</u>	<u>Total Each Rank</u>
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	
S/Sgt	1	3.5	1	3.5	6	19.	4	13.	19	31
Tec Sgt	1	20.	0	0.	1	20.	0	0.	3	5
Sgt Tec 4)	0	0.	4	12.	12	36.	3	10.	14	33
Cpl. Tec 5)	1	6.	2	11.	6	33.	0	0.	9	18
Pfc. Pvt.)	5	2.5	37	18.8	47	23.9	16	8.1	92	197
Σ	8		44		72		23		137	
					55					

It will be seen that nearly fifty per cent (50%) of the men lost for psychiatric reasons from this division had had over eight (8) months of combat experience. Thirty per cent (30%) of the psychiatric casualties was made up of non-commissioned officers, largely in the grade of sergeant or higher. This group represents those soldiers who have become "burned out" in combat. Such men in this and other divisions with similar combat experience are, as a rule, fundamentally sound stable individuals. Almost invariably they have performed with high efficiency in combat for long periods. Most of them are sent from the battlefield by their officers, rather than having sought evacuation themselves. Commendatory letters from their officers often accompany them. Reclassification for non-combat service is usually requested for them both by line officers and by division psychiatrists. These men have a high sense of duty and loyalty, but have broken under the prolonged stress of combat, accompanied by insufficient rest, a high rate of attrition in their units, and by the loss of most or all of their old friends.

Had some method existed to change their duty assignments before they had served two hundred and forty (240) actual combat days, it is likely that evacuation for psychiatric reasons would not have become necessary. In all likelihood, they would have been able to serve for one (1) or several similar periods in combat at a later date. It would appear that under the present system a large number of highly trained, efficient, and experienced soldiers are being lost for further combat duty. Although no figures are at hand, it is thought extremely unlikely that this group of soldiers will ever be fit for further combat, once they have suffered a psychiatric "break".

In CHART II are depicted the duty returns and evacuations from division clearing stations for the month of December 1944 for three (3) different groups of divisions. A represents the combined dispositions for two (2) new divisions: the 44th and 100th Infantry Divisions; B, the two (2) old divisions: the 3d and 36th Infantry Divisions; and C, two (2) Armored Divisions: the 12th and 14th Armored Divisions. The highest salvage for duty occurred in the Armored Divisions, the lowest in the "old" group, with the group of "new" divisions occupying a middle place.

Armored Divisions enjoy a somewhat unusual advantage in regard to the incidence of psychiatric casualties. Both of these Armored Divisions were new, recently arrived from the United States. In Seventh Army, during this month, Armored Divisions were never committed for long periods. They participated in short missions, and were then relieved. Under such circumstances it is not difficult to return a high percentage of psychiatric casualties to duty. There are certain other special circumstances in these divisions. Psychiatric casualties occur in great part among the troops of the Armored Infantry Battalions, which are

not infrequently employed in the same manner as other infantry. The Tank Battalions, with the security engendered by a protective armor in their tanks, give rise to very few psychiatric casualties, at least in newly-committed units. However, psychiatric breakdowns do occur in tank men after action for prolonged periods. These cases are then usually seen in soldiers who have had one or several tanks shot out from under them. They are the survivors of several incidents which were usually attended with death, severe wounds, or burns to the rest of the crews. It is not surprising that eventual psychiatric breakdown ensues after such cumulative stress.

It should be pointed out that the results achieved in salvaging psychiatric casualties within division, as shown in CHARTS I and II are mirrored by the results obtained with these cases in Army Treatment Centers. Duty returns from these installations for soldiers from "new", "old", and Armored Divisions, are comparable to those shown in the charts. In short, salvage of psychiatric casualties from Armored or newly-committed infantry divisions is high; that from old divisions with long combat exposure is low. It can be predicted from past experiences that the curves shown here for newly-committed divisions will eventually become exactly similar to those shown for the "old" divisions. Under the present policies of commitment of troops, it appears inevitable that higher psychiatric rates, with lower salvage for duty will occur in the new divisions once these have been exposed to the same amount of combat stress as the "old".

The influence of cumulative fatigue consequent to prolonged commitment in action without relief is strikingly shown by the rise in the psychiatric casualty rate to approximately twenty-five per cent (25%) of the wounded in action in the 79th Infantry Division, when this Division had been on the Line for over one hundred and twenty-five (125) days. After a rest period, the rate fell to an expected fifteen per cent (15%). It is very important that combat units should be rested at regular intervals. Tactical considerations permitting, this should be at least once a month or more often. When units are rested, this should be done in areas which are beyond the range of enemy artillery.

TABLE III shows the incidence of neuro-psychiatric disorders as encountered in Army Treatment Centers. Psychoneurosis makes up 89% of the total, and the anxiety state is by far the most prevalent of the neuroses. In combat areas psychoses are encountered very infrequently. The incidence of cerebral concussion as shown in this table does not give an accurate picture of the occurrence of this disorder in the Army. Only those of very mild degree were admitted to Army Treatment Centers. The others were treated in Evacuation Hospitals, where facilities for further specialized neurosurgical care were at hand should

these be indicated.

TABLE III

Study of 4,372 Neuro-Psychiatric Cases Seen in
Seventh Army Psychiatric Treatment Centers
August - December - 1944

incidence by Diagnosis.

	<u>No. Cases</u>		<u>% of Total</u>	
Psychoneurosis	3,885		89.	
	<u>No.</u>	<u>%</u>		
Anxiety State	3,575	92.		
Anxiety Hysteria	20	0.5		
Conversion Hysteria	73	1.9		
Reactive Depression	43	1.1		
Others	174	4.5		
	<u>3,885</u>	<u>100.</u>		
Psychosis	62	1.4		
Constitutional Psychopathic State	39	0.9		
Mental Deficiency	41	0.9		
Other Psychiatric Disorders (Includes "No Disease")	204	4.7		
Cerebral Concussion	43	1.0		
Organic Neurologic	98	2.1		
Total	4,372	100.		

TABLE IV shows the disposition of cases from Army Psychiatric Centers, according to diagnosis. It will be seen that only 16.5% of the cases with anxiety states could be returned to duty in this series. It must be emphasized however, that Seventh Army Psychiatric Centers received only screened combat cases. The milder cases had already been held and returned to duty within division. The diagnosis of anxiety hysteria was rarely used because of the confusion among psychiatrists as to what is understood by this term. Conversion hysteria, as seen at this level, carried a fairly good prognosis for return to duty. Only one of the patients with reactive depression could be salvaged for combat. Most of these patients are sufficiently severely ill to require evacuation to the Base.

TABLE V is a study of the recurrent psychiatric casualties. Many of these had been treated in Army and Base hospitals during the Italian Campaign. It will be seen that the majority of the patients were re-admitted within ten (10) days of return to duty from Army Centers. This group represents those patients who had not recovered sufficiently or whose illness was too severe for them to continue to serve effectively in combat. It also includes those men who were not sick, but primarily "motivational" casualties. They were not deemed to be suffering from true psychiatric disorder. It was this latter group which made up in large part the fifty-six (56) men who were returned to duty a second time. Of more interest is the fact that over thirty per cent (30%) of the recurrent cases had remained in combat for more than thirty (30) days before requiring medical care a second time.

TABLE V

Psychiatric Study of Cases Recurrent after
Return to Duty from Army or Other Hospitals

Total Number of Cases Returned to Duty From Army Centers 21 August 1944 Through 31 December 1944			1,204
Total Recurrent Cases Seen in Same Period			335
Percentage of Recurrent Cases			28%
Number of Recurrent Cases Returned to Duty a Second Time			56
Percentage Returned to Duty a Second Time			17%
<u>Time on Duty in Combat Before Recurrence</u>	<u>Number</u>	<u>% of Total</u>	
0 - 10 days	157	46.8	
11 - 30 days	75	22.4	
31 - 60 days	23	6.8	
61 - 90 days	9	2.7	
91 - 120 days	19	5.7	
121 - 180 days	23	6.8	
181 - 240 days	20	6.1	
241 - 360 days, or longer	9	2.7	
Total	335	100.	
Total Over Thirty (30) Days	103	30.8	

TABLE VI finally, gives the consolidated figures for dispositions for each two-week period from 15 August through 31 December, 1944. Under the heading "Divisions" are given the duty returns and evacuations from Revision Clearing Stations. Under the heading "Army" are given the dispositions made from Army Hospitals, including both the Psychiatric Treatment Centers, the Evacuation, and the Convalescent Hospitals. Consolidating these two (2) categories a combined total of three thousand one hundred and seventy-one (3,171) cases were returned to full duty from Divisions and Army installations, while three thousand eight hundred and eighty-three (3,883) were evacuated out of the Army. The combined salvage for full duty achieved was 44.9% of the total.

TABLE VI

<u>Period</u>	<u>DIVISIONS</u>			<u>ARMY</u>				
	To Duty within Divs.	Trans- ferred out of Divi- sion	Total	% Duty	Duty Trans- ferred from Hosp	Army out of Army	Total	% Duty
15-31 August	56	57	113	50	19	47	66	29
1-15 September	70	117	187	37	18	154	172	11
16-30 September	135	445	580	23	59	443	502	12
1-15 October	189	604	793	24	204	758	962	23
16-31 October	130	472	602	22	145	600	745	20
1-15 November	127	419	546	23	129	387	516	25
16-30 November	359	236	595	60	153	520	673	23
1-15 December	483	467	950	51	195	368	563	35
16-31 December	419	307	726	52	281	606	887	32
Total	1,968	3,124	5,092	38	1,203	3,883	5,086	24

—
ext.

TABLE IV

Disposition of 4,372 Neuropsychiatric Cases Seen
in Seventh Army Psychiatric Treatment Centers

Psychoneurosis	Evacuated Out of Army	Duty	Total	% Duty
Anxiety State	2,984	591	3,575	16.5
Anxiety Hysteria	13	7	20	35.
Conversion Hysteria	50	23	73	31.5
Reactive Depression	42	1	43	2.3
others	134	40	174	23.
Total Neuroses	3,885	662	3,223	17.
Psychosis	61	1	62	1.6
Constitutional Psychopathic State	16	23	39	59.
Mental Deficiency	34	7	41	17.
Other Psychiatric Disorder (Includes "No Disease")	19	185	204	91.
Cerebral Concussion	20	23	43	53.
Organic Neurologic	51	47	98	48.
Total	3,424	948	4,372	21.7

In Seventh Army it has been the policy to return to their own units for administrative reclassification, under AR 615-368, those soldiers in whom a diagnosis of constitutional psychopathic state was established. Such cases do not properly belong in medical installations, and their disposition is the responsibility of command. It has been our belief that this policy is preferable to that which favors the holding of such board proceedings in hospitals. The responsibility rests upon the soldier's own unit, and the information necessary to accomplish discharge under this section is much more easily obtained there.

Under the category "Other Psychiatric Disorders", were included those soldiers in whom no psychiatric disorder could be demonstrated. In this group were placed those men who were poorly motivated, or who were primarily unwilling to continue to serve in combat. The high duty return of this group reflects our views that these men also are a command responsibility, and should not be granted medical evacuation,

S E L E C T E D .
P U B L I C A T I O N S

Annex No. 6, Medical Dated 20 Jun 44

SUBJECT Admin. Instructions No. 1
pp 62-68

From Hq. Force 163, APO 512, U.S. Army

To _____

9 MAY 1951

REMOVED FROM THIS FILE.

HD 319.1-2

IRVIN H. AHLFELD, Capt, MSC

See classified file HD

*Annual Rpt of med Dept Activities of the
med Sec, Hq 7th Army for the year 1944*

Classification

CONFIDENTIAL

HEADQUARTERS SEVENTH ARMY
Office of the Surgeon
APO 758 US ARMY

18 July 1944

CIRCULAR LETTER NO. 2

SUBJECT: Surgery.

General	1
Echelons	2
Morphine	3
Tetanus	4
Surgical Procedures	5
Plaster Casts	6
Plasma and Blood	7
Sulfonamides and Penicillin	8
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1. The surgical policy that will be followed is a development of those principles and modes of Therapy that have been developed and established by NATOUSA throughout the past eighteen months. Full use will be made of a vigorous transfusion-resuscitation program by the establishment of blood banks within each hospital unit with the assistance of the Army Blood Bank (Sec. VII) and the mobile laboratories. Control of infection will be strengthened by the use of penicillin, which will be available in sufficient quantities so that treatment may be continuous from the Field Hospital to the Base. Treatment of the patient must be considered as a continuous unified effort with utmost cooperation and clarity of treatment and records by each echelon concerned. A combination of the saving of life and limb with early restoration of function and return to duty should be the aim of all installations.

2 Surgical Echelons Extract 6 from NATOUSA Circular on Forward Surgery:

"a. The welfare of the patient and the tactical necessity for rapid, yet safe, evacuation, demand a clear understanding of the function or mission of each unit of the Army Medical Department. This is best arrived at by dividing the treatment of a casualty into two stages--primary and definitive. Separate groups of units provide each stage of treatment. In general, the equipment of each group is designed for its particular purpose only.

"b. Aid Stations, Collecting Stations, and Clearing Stations (First and Second echelons) are equipped and staffed to render the primary phase of treatment. Arrest of hemorrhage, splinting, resuscitation measures needed to make the patient transportable, and administration of sulfonamides, are the prime functions of these stations. In addition, the treatment of minor injuries is carried out without evacuation. A Clearing Station is not designed to provide definitive treatment of battle casualties."

c. A proportion of admissions will be nontransportables. A nontransportable is a patient that cannot be evacuated farther without real danger to life and limb. (FM 8-10, par. 65c) These patients will be transferred immediately to the attached Field Hospital Unit in support of the Clearing Station. No surgery will be performed forward of the Field Hospital,

d. Third Echelon units, Field and Evacuation Hospitals, with attached Surgical Teams, are designed to initiate surgical treatment of battle casualties. Every effort should be made to deliver casualties requiring hospitalization to these units as quickly as possible so that lives may be saved, proper surgical care instituted, and convalescence shortened.

(1) The Field Hospital Units supporting Division Clearing Stations are equipped to care for non-transportable casualties. These consist of two groups: First, those suffering from grave life endangering physiological disturbances, such as hemorrhage, severe shock, cardiorespiratory imbalance from wounds of the pericardium or large sucking wounds of the chest, intra-cranial pressure, and certain maxillo-facial or neck wounds in which there is obstruction to respiration. Second, there is the group of impending fulminating infections; this includes all thoracoabdominal and abdominal wounds or wounds in other areas that may have penetrated the abdomen, such as wounds of the buttocks and thighs; extremity wounds with severe vascular injuries or evidence of gas infection, major traumatic amputations, and compound fractures of the long bones with extensive soft part damage.

(2) The Evacuation Hospitals are of two types: The semi-mobile 400-bed, and the 750-bed installations. To these are transported all cases not requiring the first priority urgent surgery of the Field Hospital units, and also medical and venereal patients. At times certain of these units may be used for specialized triage purposes.

3. Morphine. An initial dosage of morphine sulfate, gr. $\frac{1}{4}$ (0.015 gms.) is sufficient. Doses of gr. $\frac{1}{2}$ (0.030 gms.) are too large; such dosage causes too great respiratory depression, is definitely bad for intra-cranial and maxillo-facial lesions, and accomplishes no more than the smaller dose in abdominal and chest casualties. Whenever morphine is administered, the amount and time will be clearly recorded. Morphine, when given subcutaneously, is poorly and slowly absorbed in patients who are in shock; therefore, repeated administration in such cases is fraught with real hazard, for, as recovery from

shock ensues, absorption of the accumulated amounts may be rapid and morphine poisoning result. This danger may be avoided in such patients in shock by a single dose of gr. 1/6 (0.010 gms.) to gr. 1/4 (0.015 gms.) given intravenously, never more.

4. Tetanus. A stimulating dose, 1 cc., of tetanus toxoid will be given to all casualties in first or second echelon units. This dose will be recorded in the EMT Tag. To date there has been only one (1) case of tetanus in the U.S. Army in this Theatre.

5. Surgical Procedures.

a. Dressings. After initial application, dressings will not be disturbed until the Field or Evacuation hospital is reached, except for hemorrhage. They are inspected at each stop along the line of evacuation, however, and splints readjusted or dressings rearranged when necessary. Frequent and unnecessary change of dressings increases the risk of hemorrhage and infection and also increases time-lag from wounding to initial surgery. "Innumerable sufferers in every war have been bandaged into their graves at the hands of over-enthusiastic dressers." (Jolly)

b. Tourniquets. Tourniquets are seldom necessary and frequently misused. When applied properly for otherwise uncontrollable hemorrhage, a tourniquet may be a life-saving measure. When improperly applied, however, bleeding is increased and complete exsanguination may occur. The sole indication for their use is active spurting hemorrhage from a major artery. For hemorrhage from veins and lesser arteries a small pack and bulky pad bandaged snugly over the bleeding point will almost always suffice. To date the tourniquet has been used with good judgement by Aid Men and Battalion Surgeons. In applying the tourniquet, if rubber tube or bandage is employed, 2 or 3 turns are made about the limb stretching the rubber between each application. The knot or ends are then to be made fast so as to prevent any slipping. The limb is observed for a few moments to be sure that hemorrhage has ceased. If not, the tourniquet must be readjusted and tightened. Unless the tourniquet is so applied as to accomplish its purpose of stopping hemorrhage, it is not only useless, but harmful, and may well cost a life rather than save one. When non-elastic material and Spanish windlass mechanism is used, a firm pad or roll of bandage is placed over the course of the artery, one turn of the tourniquet made about the limb, and the tourniquet tightened until all bleeding stops. The windlass is secured so that no relaxation occurs, and the limb observed for a few minutes. Do not apply a tourniquet directly over the skin, if possible. Leave a layer of clothing or towel in place. Whenever a tourniquet has been applied, this will be so noted in CAPTALS on the EMT Tag and the reason therefore stated as a guide to all stations to the Field hospital.

c. Amputations. The policy on amputations is one of conservatism, every effort will be made to save and give the limb a chance. The prompt administration of penicillin, meticulous debridement, and possible paravertebral sympathetic block will help. Amputations will always be performed at the lowest possible level. They will be circular, the incision passing through each tissue layer at the level of retraction of the next most superficial

layer; i.e., skin, deep fascia, muscles, bone, no primary suture. A loose covering of fine mesh dry or vaseline gauze will be placed over the surface and skin traction down to the skin edge applied immediately. 5-10 pounds are used. When applied evenly this has the beneficial effect of an even pressure dressing. Packing will Not be used. In lower leg amputations some type of posterior splint from mid thigh to beyond the stump is provided to prevent contracture at the knee. A Thomas splint or plaster cuff with wire cage may be used for attachment of traction. No skin grafting or secondary suture will be performed in army installations. The object of amputation for trauma is the saving of life and as much limb length as possible. Every inch saved is of great value in forming the final useful stumps. This, however, must be left to Base and ZI Units.

d. Debridement of Wounds. Careful attention will be given to Circular Letter, No. 26, Office of the Surgeon, MATOSa, 19 April 1944, Subject. Wound Management. "The keystone of successful wound management is the initial surgical operation. When this is performed correctly the complications of infection are absent or minimal and secondary suture may be carried out promptly and successfully." Chemotherapy is an adjunct and can never be substituted for meticulous, complete, proper initial surgery. Good light and wide incision to provide ample exposure are necessary to permit adequate removal of damaged underlying tissues. A team of two is far superior to the single operator. All foreign matter, loose and unattached bone fragments, damaged muscles, and fascia must be removed at the initial procedure. An absolute minimum of skin is removed and wounds are never circumsised. No primary suture, except of cranial wounds and some wounds of the face.

(1) Head wounds are to be transferred promptly to an Evacuation Hospital unless there are signs of intracranial pressure or uncontrollable hemorrhage, when they will go direct to a Field Hospital.

(2) Eyes. One (1) per cent atropine is to be instilled, an anesthetic bland ointment, such as butyn metaphen smeared liberally in the eye, and across the lids, and a pressure dressing held snugly in place with overlapping strips of adhesive applied. The patient is then sent to an Evacuation Hospital. Here a conservative policy will be pursued and every effort made to preserve the eye. There is no danger of sympathetic ophthalmia within the first three weeks after injury. Therefore, unless there is danger from infection or hemorrhage, great conservatism will be practised.

(3) Maxillo-facial. Ensure an adequate airway and transfer sitting or semi-prone to an Evacuation Hospital. Occasionally it may be necessary to send such a casualty directly to a Field Hospital.

(4) Chest. These patients are to be sent as No. 1 priority to a Field Hospital when there is continuing hemorrhage, signs of cardiorespiratory failure, or suspicion of abdominal involvement. Otherwise, transfer to an evacuation hospital.

(5) Abdomen and Thoracoabdominal cases are all sent direct to the hospital nearest the Clearing Station, usually a Field Hospital.

Wounds of the rectum are included in this group. Wounds of the buttocks and upper thighs are frequently in this group. A rectal examination will be done on all cases. Blood on the examining finger indicates rectal involvement. A colostomy is performed for all wounds of the rectum, preferably of the simple loop type. In all wounds of the colon, the damaged part is exteriorized or if the wound is in a fixed portion of the colon, a proximal colostomy is performed. The abdomen is always closed with through and through sutures; the peritoneum and posterior and anterior sheaths may be closed in addition.

(6) Joints will be widely opened, meticulously debrided of all foreign matter, dead tissue, loose and regged fragments of bone and cartilage, and blood clot, and then thoroughly irrigated with saline. The synovia is then closed, a flap of fascia or skin being utilized to close defects when necessary, and 10,000 units of penicillin (250 units per cc. in saline) are injected into the joint. The skin is not to be sutured and no drains are to be used into the joint. The limb is then immobilized in plaster. For the knee, the most common and important joint affected, a hip spica is applied. Under periods of great stress a circular upper thigh to lower leg cast may be substituted. For immobilization of the knee this is not as good as the hip spica, but is far superior to the usual lower leg mid thigh cast, which permits rocking of the joint. The cast will be split.

(7) Compound Fractures. Many casualties with compound fractures of the long bones or traumatic amputations are in severe shock or have lost much blood so that prompt resuscitation is necessary. These are transferred direct to the Field hospitals. The purpose of the forward hospital is not to treat the fracture but to make such casualties transportable to the rear as rapidly as possible where treatment of the fracture will be undertaken. For this reason, only thorough debridement and plaster immobilization of these cases will be carried out in forward hospitals, and parenteral administration of penicillin begun (Sec. VIII). Internal fixation will be used only when it is evident that the circulation will be jeopardized by impingement of the bone ends. Pins incorporated into casts will not be used. They do not transport well. The transportation cast is the safest and most practical and comfortable means for transporting such patients to the rear. These casualties will be given first priority evacuations. Such casts will also be used for extensive soft part injuries without bone or joint damage.

(8) Nerve Injuries. Nerves will not be sutured in hospitals of the first three echelons. There are no exceptions.

(9) Blood Vessels. Rarely it may be possible to repair wounds of major arteries. If not, they are to be doubly ligated and the damaged portion excised. Never ligate in continuity. The accompanying vein is ligated and divided, adjacent nerve trunks are injected with 1 per cent procaine and paravertebral block of the sympathetic chain with 1 per cent procaine is performed. This may be repeated at 12-24 hour intervals or

sympathectomy decided upon. Cases of major vascular injury will be sent to the nearest unit, generally a Field hospital.

(10) Evacuation. As far as possible, no abdominal, thoraco-abdominal, head, or major vascular casualties will be evacuated before the 10th or 12th post-operative day. The same applies to the more serious chest cases. Such patients do not tolerate transportation. Fractures will have first priority.

(11) Records. The need for careful, accurate, legible, records is emphasized. A concise, clear description of what is done in each installation is essential for the best uninterrupted and continued care of the patient. The "how, when, and where" of a wound or injury are the first items to be noted. The "when" includes the hour as well as the date of occurrence, and the same applies to the time of arrival in different installations. The type of missile is also noted. It is particularly important to note on the record, and also on the cast, the presence and size of skin defect, the type of fracture, nerve and vessel lesions, and the type of colostomy formed and length of spur when present. Sulfonamide and penicillin therapy as to amount given and whether or not continuance is desired will be stated.

6. Plaster Casts. When plaster of Paris is used, no circular adhesive or bandage will be applied underneath the cast. All casts are to be padded, and all are to be split throughout their entire length immediately. This splitting must include all layers of circular padding or dressings down to the skin. Unpadded or unsplit casts have no place in forward installations. The foot is to be at right angles to the leg, the knee and hip flexed very slightly, and the toes free. The planter surface of the cast will extend beyond the toes or a loop beyond the toes made so as to withstand the weight of the bed clothes. In arm cases, the arm is in neutral position, slightly forward, with the wrist and hand supported in neutral position, or in cock-up. Flexion at the wrist is not to be used. Casts with the arm in full abduction or hanging casts, will not be used, as these are very poor for transportation. In third echelon installations, casts are used for transportation purposes as well as for the underlying injury--soft part, or fracture; hence, transportability becomes an important consideration, and the cast applied accordingly. Diagrams, dates of wound and casting, and notes will be written on casts with an indelible pencil.

7. Plasma and Blood. Plasma is used in all places from the battle-field itself to the ZI. As a measure of resuscitation, its value rests chiefly in supporting the hemorrhage or shock casualty until he arrives at a station where whole blood is available. It is in no way a substitute for whole blood. Up to 750 ccs. may be given rapidly. After that there is the danger of further diluting an already grave hemodilution. Careful perusal of Circular Letter No. 30, Office of the Surgeon, NATOUSA, 12 May 1944, Subject: Blood Transfusions, is recommended, and its instructions will be

followed. An Army Blood Bank Unit will furnish low titre "O" blood to the Field Hospitals. Depending on the demand here, some may be available for the Evacuation Hospitals. This blood may be used for all patients in amounts up to 1000 or 1500 ccs. After this, specific type blood should be used. High titre "O" blood will also be available but the use of this must be restricted to "O" recipients. All recipients and donors will be cross-matched. This may be rapidly performed (3-5 min.) by the centrifuge method and doubtful cases checked by the longer slide technic.

a. It is essential that the Evacuation and rear units maintain their own blood banks as outlined in Circular Letter No. 30. Only in this way can adequate supplies of whole blood be assured. Blood will be used judiciously and not wasted. Only the amount needed to bring about adequate resuscitation and carry the patient through his surgery and post-operative period is to be given, for the risk of fatal anuria is not negligible. There will be adequate blood available at first, but the various units will organize their own blood banks as rapidly as possible.

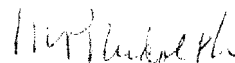
8. Sulfonamides and Penicillin. Sulfonamides will be used both locally and orally at the original dressing of the wounded casualty. No further local application will be made until the patient reaches the Field or Evacuation hospital, though oral administration will be continued. When admitted to these installations all except the certainly trivially wounded will receive an initial injection of 25,000 units of penicillin intramuscularly, which is to be continued on a 3-hour schedule until stopped by the surgeon. At the first dressing or operation he will decide whether to continue penicillin or sulfonamide. Both will not be used. Instructions given in Circular Letter, NATOUSA, Subject: Penicillin, will be carefully followed.

9. Infections. The Clostridial infections comprise the important group that is encountered in forward surgery. Early, careful, thorough surgery, combined with adequate blood replacement and penicillin is the best preventive. Sulfonamide Therapy is of no demonstrable value, either as a preventive or therapeutic measure. Certain facts relating to the incidence should be borne in mind. About three-quarters of the cases are in wounds of the lower extremities. One-half are complicated by fractures, and one-third by vascular injuries. Yet the mortality is lower in these two groups than when only soft parts are injured. Apparently less concern is felt over the possibility of "gas" in this type of wound and these cases are not recognized early. Jergesen has described the early symptoms as: 1. pain, 2. mental changes, either hyperactive or drowsy and apathetic, 3. rapid pulse out of proportion to temperature, 4. temperature. To these may be added loss of appetite. The most important and common of these is pain, often with strikingly sudden onset. This should call for immediate re-examination of the wound and not just a "dose of morphine and drop around later" policy. Inspection of the wound will show swelling, sometimes skin discoloration, muscle changes, possibly the presence of gas, and possibly a putrefactive odor. Early diagnosis may be greatly facilitated by proper training of the nursing and ward personnel, and supervision of this problem by one or two officers in a unit. In this way any change in a patient's

condition will be noted early and brought to the attention of the surgeon, and many valuable hours saved. True clostridial myositis should be differentiated from anaerobic cellulitis. In the former, the infection is in the muscles or muscle groups, in the latter it is in the fascial planes, and the muscles are uninvolved. Anaerobic cellulitis responds readily to wide incision, excision of damaged tissues, and penicillin. With the use of penicillin, blood, and perhaps antiges serum, the surgery of true clostridial myositis may be more conservative than formerly. If the infection is limited to one or only a few muscle groups, these alone may be completely excised and a wide fasciotomy performed. No amputation will be performed merely for the control of the infection. If the limb is so badly impaired that it will be of no functional use, or if after excision of the involved muscles the limb would be useless, then amputation is indicated. It should be performed at the lowest level consistent with a healthy useful limb. It need not be completely above the limit of the infection for such infected muscle as may be left can be excised and an extended fasciotomy performed. The patient may then be carried along on penicillin therapy and other adjuncts.

10. Burns. Burns will be treated by application of boric ointment gauze and pressure dressings. The use of a snug fitting stockinette over the dressings is recommended. This provides even pressure. Unless the burn is grossly dirty no initial cleansing will be done. Blisters are left undisturbed or aspirated with sterile precautions. When cleansing is necessary, simple non-irritating detergents such as white soap are employed. Loose tags and shreds of tissue are snipped off. No further debridement is carried out. Full aseptic technic in caring for burns, with all personnel masked, is employed. Tannic acid or other escharotics will not be used. In severe burns a secondary anaemia develops, hence, whole blood, as well as plasma will be necessary. The employment of these will be governed by the plasma protein, hematocrit, and hemoglobin levels, as well as by the clinical condition of the patient. Adequate plasma, blood, and fluid replacement is essential, but one must be careful not to drown the patient with an over-enthusiastic program.

11. The Patient. From start to finish, from the Aid Man until the final completion, one way or the other, of the case, all those having care of and contact with the wounded, injured, or ill, must constantly bear in mind that he is one of themselves—a human being. Carelessness, neglect, and rough or harsh treatment will never be tolerated. The patient must always be cared for as one would like himself to be treated. Thus, kindness and consideration go hand in hand with therapy.


M. P. RUDOLPH
Colonel, MC
Surgeon

HEADQUARTERS SEVENTH ARMY
Office of the Surgeon
APO 758 US Army

21 July 1944

CIRCULAR LETTER NO. 3

SUBJECT: The Auxilliary Surgical. Group Teams.

1. The Auxilliary Surgical Group Teams and supplementary teams added from Evacuation and General Hospitals are designed to provide Major surgical care. In order to carry through, certain hospital facilities are essential. None of these exist in a beach group clearing station. Here all treatment must be performed, first aid with prompt evacuation to the boats. Any attempt at definitive surgery here is wasteful of time and effort and decreases the efficiency of the Beach Group operation.

2. Past experience both in Sicily and Italy has shown this to be true:

a. A Surgical Group attached to a Beach Clearing Station did nothing but first aid for 24 hours.

b. Another group did nothing for 48 hours.

c. A third group performed 1 debridement in 24 hours.

3. There are no replacements for these groups, therefore they should be used where most needed. This place is the Field Hospital, which accompanies the Division Clearing Stations. These Field Hospital Platoons are so loaded that equipment and personnel debark together ready to function. All attached Surgical and Shock Teams accompany the platoons to which they are attached. To send one or more of these groups ashore on the initial assault, detracts from the maximum effort and may render them unavailable in the hospitals when most needed.

M. P. Rudolph

M. P. RUDOLPH,
Colonel, MC,
Surgeon.

HEADQUARTERS SEVENTH ARMY
APO 758 US ARMY

AG 726.1

CIRCULAR)
:
NUMBER 10)

2 August 1944

CLASSIFICATION CANCELLED
by authority of
THE SURGEON GENERAL

DATE APR 27 1950
VENEREAL DISEASE CONTROL B. ROGERS, MC

MAJOR FRANK
DISTRICT DIVISION

1. Venereal disease control is a command function and excessive rates in a command are a reflection upon the commanding officer. Pride in health should be as important as pride in the other achievements of an organization. Every effort will be made to reduce the number of new venereal disease cases.

2. In order to provide an adequate continuous anti-venereal disease program, it is essential that information and instructions reach the individual soldier. This will be accomplished by the appointment of a subordinate officer in each company or unit of smaller size to function as the venereal disease control officer. Noncommissioned officers will be employed as assistants and it will be their responsibility to carry out the details of the program.

3. The Seventh Army venereal disease control officer will periodically confer with unit control officers regarding problems that arise and for furthering the program by the transmission of new ideas.

4. Unit control officers will be expected to hold weekly meetings with their noncommissioned officers to distribute information and for ascertaining what is being accomplished with the individual soldier.

5. Ten percent (10%) strength of every unit will receive instruction and training in the technique of giving a venereal prophylaxis treatment.

a. Divisions and separate units having attached medical personnel will provide their own teaching facilities.

b. Units receiving first echelon medical service from Medical Battalions, or from units with attached medical personnel, will make arrangements for the instruction to be given by the medical personnel of these organizations.

c. Selection of Attendants: The attendants will be selected from among the best men in the organization. They will be of good character, conscientious and trustworthy. A noncommissioned officer will be in charge of each station. The attendants will be instructed in the following subjects:

- (1) The meaning and method of obtaining surgical cleanliness.
- (2) Simple facts about germs, with special reference to those causing venereal disease.

- (3) Simple descriptions of the anatomy and physiology of the male and female organs.
- (4) Descriptions of the ordinary symptoms and course of gonorrhea, syphilis and chaneroid.
- (5) 1a the making of silver protein, strong (protargol) solution.
- (6) In the making of bichloride solution.
- (7) Method of prophylaxis und the scientific reasons for each step.

6. The technique used in the administration of venereal prophylaxis treatment will be in strict compliance with paragraph 4b, NATOUSA Circular Letter 33, dated 7 June 1944.

A copy of the procedure described therein will be displayed in every prophylactic station at all times.

7. Appendix.

a. Teaching instructions to be used by unit venereal disease control officers and their noncommissioned officers for all enlisted personnel.

By command of Major General PATCH:

ARTHUR A. WHITE,
Brigadier General, GSC,
Chief of Staff.

OFFICIAL:

W. G. Caldwell
W. G. CALDWELL, GSC
Colonel, AGD,
Adjutant General.

1 Incl:

Appendix A

DISTRIBUTION "B"

"APPENDIX A"

VENEREAL DISEASE CONTROL*
INSTRUCTION COURSE

- I Male Uro-Genital anatomy
- II Female Uro-Genital Anatomy
- III The Three Commonest Forms of Venereal Disease
- IV Recommended Preventive Measures
- V Practical Demonstration of Venereal Prophylaxis Treatments (To be carried out by trained personnel).

1. Male Uro-Genital Tract.

This system extends from the kidneys in the upper back part of the belly (upper abdominal region) to the end of the penis. The sac, called scrotum, and the glands (testicles or balls) contained therein, are the sexual part of this system.

a. Organs

(1) Kidneys: Two in number, right and left, one on each side of the spinal column. They produce your urine, or water, from the blood which the large kidney blood vessels bring to them,

(2) Ureters: They are two small tubes which extend from each kidney to the bladder. Their function is, to carry the urine from the kidney,

(3) Bladder: A hollow sac of muscles located in lower part of the belly, just behind the front girdle bone. It is the reservoir for the urine coming from the kidneys.

(4) Urethra: The tube running from the bladder to the outside through the penis.

(5) Testicles: The glands of the body which make the life sperm, which when united with the ova of a woman produces a baby. They are commonly called "nuts" or "balls". They are two in number and lie in a pouch called the scrotum (bag).

(6) Epididymis: A tube-like structure coiled up on the back of the testicle. It takes the male sperm cells from the testicles to the vas deferens.

(7) Vas Deferens: The tube leading to the seminal vesicals.

(8) Seminal vesicals: A pouch, one on either side between the bottom of the bladder and the rectum, which holds the male germ cells. Small ducts carry the cells to the back part of the urethra.

(9) Prostate gland: A chestnut-shaped organ just in front of the bladder and around the urethra, at this point. It makes a liquid substance or secretion that mixes with the male germ cell and prevents its destruction. It is this gland that gonorrhea or clap frequently injures resulting in a loss of manhood and severe chronic bladder irritation.

2. Female Uro-Genital System.

a. Organs

(1) Kidneys: Two in number, right and left, one on each side of the spinal column. They produce the urine, or water, from the blood which the large Kidney blood vessels bring to them,

(2) Ureters: Two in number. They are tubes running from the kidneys to the bladder. They take the urine or water to the bladder.

(3) Bladder: Is a muscular pouch or bag, and lies just behind the small bone forming the front of the girdle bones. It stores the urine until it is passed off.

(4) Urethra: A tube running from the bladder to the outside for passage of urine. Terminates or ends in the top of the vaginal opening.

(5) Ovaries: Two glandular organs, one on each side of the lower abdomen, slightly behind the tubes. They develop the female ova cells.

(6) Tubes: One on each side, extending from the upper sides of the womb. The end is funnel shaped so as to catch the female germ cell allowing it to pass into the womb.

(7) Womb: One in number. Located in the lower part of the belly space between the bladder and rectum. Holds the fertilized egg as it develops into a baby.

(8) Vagina: Space in which sexual intercourse takes place and through which a new baby passes at birth. The opening is surrounded by four lips, two small lips, one on each side next to the space, and two large lips, one on each side next to the outside rim of the small lips. On each side of the vagina, or birth canal, about midway from top to bottom, is a gland. These are often diseased by gonorrhea or clap and remain a source of infection for a long time.

3. The Three Commonest Forms of Venereal Disease:

a. Gonorrhea (Clap):

(1) Cause: A germ named gonococcus ("Clap germ"). It is coffee-bean shaped and is usually found in pairs. It enters the penis during sexual contact with an infected woman. The hatching (incubation) period in the body is usually 24 hours to 10 days, the average being the 3rd to 4th day.

(2) Signs: The first symptoms are usually tingling, itching or burning in the tip of the penis; then in about 24 hours a thick yellow or white pus discharges from the penis. There is pain and burning on making water (urinating) and sometimes swelling of the head and foreskin of penis. The pus may become bloody.

(3) Remarks: If untreated, or not properly treated, this disease can produce many complications such as:

- (a) Strictures that prevent the free passage of urine from the penis.
- (b) Prostatitis. Inflammation of the prostate gland which may result in loss of manhood and bladder trouble.
- (c) Gonorrheal rheumatism and arthritis, resulting in a crippled body.
- (d) Condylomate (warts) on the penis and rectum.

b. Syphilis:

(1) Cause: A germ (bacteria) called spirochete (shaped like a cork-screw). It enters the body during sexual contact with an infected woman. It can also enter the body when kissing. A mother may give this disease to her unborn child if she has been infected by the father, or if she had the disease before marriage and hasn't had the proper treatment.

(2) How the Disease begins (outset).

(a) Hatching (Incubation period)

1st Stage - A chancre (lesion or sore) usually appears 10 to 60 days after infection. The average time is about three weeks after infection. The disease is always in the blood before appearing on the body in the form of an ulcer.

2nd Stage - 6 weeks to 6 months; few or no signs - secondary anemia (weak blood) and enlarged "kernals" (glands). At the end of this period a copper-colored rash may appear, also greyish white mucus patches in the cheeks and throat. Pain in the bones and stomach trouble (nausea and loss of appetite) are common symptoms. The infected person frequently becomes nervous and cranky.

Later Stages - It may cause softening of the brain (paresis), blindness, loss of hearing and loss of voice. Fatal heart disease and body paralysis can also result. All the later stages of this disease are practically incurable, because the tissue parts are dead. The disease is shown by the signs (symptoms) you show and by blood tests and spinal fluid examinations.

c. Chancroid: (Caused by germ: bacillus of Dueray)

Also known as soft sore, or blue balls. Cause: Sexual contact with an infected woman. The hatching (incubation) period is usually 3 to 21 days, often less than three days. It causes sores on the penis. Chancroid can be spread by touching the ulcer and then touching another part of the body where the skin surface is broken. Even when treated these ulcers may cause swelling of the glands in the groin that develop into abscesses. It is often necessary to drain the pus from these infected glands and this is a long and painful procedure.

4. RECOMMENDED PREVENTIVE MEASURES:

a. The use of a rubber condom carefully rolled on the penis with about three-quarters (3/4) of an inch space left between the tip of the rubber and the head of the penis, is your best means of protection. Your next most effective protection is to urinate immediately and then thoroughly wash your penis, bag and surrounding parts with an abundant soapy lather. Complete your treatment within an hour's time by securing a US. Army chemical prophylaxis.

HEADQUARTERS SEVENTH ARMY
APO 758 US ARMY

CIRCULAR)
:
NUMBER 13)

PSYCHIATRIC CONSULTATION SERVICE IN MEDICO-LEGAL CASES IN THE SEVENTH ARMY

1. Division Psychiatrists, functioning at Division Clearing Stations, and Army Psychiatrists, at the 1st Platoon, 616th Clearing Company, are available to furnish psychiatric consultation in medico-legal or administrative cases where such service is deemed advisable or necessary,

2. In most instances, such cases can be satisfactorily handled as ambulatory out-patients at the above-mentioned installations. Admission is not usually necessary.

3. In cases in which there is a question of mental responsibility or psychiatric disorder, it is advisable to request psychiatric consultation at the earliest convenience. The mental status of a soldier may change considerably with the passage of time; if an offense has been committed, just and adequate psychiatric appraisal of the soldier's condition at the time of the offense may become very difficult if much time is allowed to elapse.

4. In order to facilitate evaluation, it is advisable that soldiers referred for psychiatric consultation be accompanied by adequate information. Whenever possible, this should include:

a. A brief statement as to the exact circumstances surrounding an alleged offense, if such has been committed, including when indicated, information as to the tactical situation of the organization at that time,

b. Personal data as to the soldier's age, length of service, previous efficiency and record, previous offenses, if any, and habits in regard to the use of alcohol or narcotic drugs,

c. A brief statement as to any unusual actions or behaviour on the part of the soldier prior to or at the time of an alleged offense,

d. If charges have been preferred, it is advisable to furnish the consultant with the Charge Sheet, as well as the report of the investigating officer in his case.

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5. The above information is most effectively furnished by a brief statement by the soldier's commanding officer or by his unit medical officer,

By command of Lieutenant General PATCH:

ARTHUR A. WHITE,
Brigadier General, GSC,
Chief of Staff.

OFFICIAL:

W. G. Caldwell
W. C. CALDWELL,
Colonel, AGD, *A*
Adjutant General.

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HEADQUARTERS SEVENTH ARMY
Office of the Surgeon
APO 758

US ARMY

CLASSIFICATION CANCELLED
by authority of MPR/pmm
THE SURGEON GENERAL
13 August 1952
APR 27 1950
MAJOR FRANK B. ROGERS, MO
Historical Division
Frank B. Rogers

CIRCULAR LETTER NO. 4

SUBJECT: Care of Neuropsychiatric Casualties in Seventh Army

TO : All Medical Officers.

1. Experience in the Italian Campaign has shown that holding neuro-psychiatric casualties in the most forward installations, with earliest possible treatment, results in the salvage of the greatest number of such cases for full duty.

2. Many soldiers with a history of pre-induction inadequacy or with mild to moderate battle-induced symptoms can be returned to duty as usable soldiers by their unit surgeons with proper handling.

3. Neuropsychiatric battle casualties should be treated with kindness, firmness, and realism. Sympathy pays dividends, but must not be allowed to take precedence over the necessity for conserving combat manpower.

4. Recognition and Diagnosis. Alert battalion or dispensary surgeons rapidly learn to recognize the important categories of combat-induced psychiatric disturbances and to distinguish salvageable from unsalvageable cases. Understanding of the behavior and reactions of the soldier in combat is far more important than formal psychiatric knowledge.

5. Treatment. The primary object of treatment is hold and return to duty the maximum number of these casualties.

a. Treatment of physical exhaustion plays a major role in many of these cases. Adequate shelter, rest, food, and fluids are essential. However, patients should not be evacuated solely because of lack of adequate treatment tentage. They can, if absolutely necessary, be handled with a minimum of medical housekeeping.

b. Sedation. Morphine is not to be used in these cases. Adequate usage of barbiturates is the treatment of choice. Doses sufficient to produce one night's sleep are to be employed. (Nembutal gr. III to IVss or Sodium Amytal gr. VI to IX by mouth usually suffices.) Cases severe enough to require intravenous sedation should be so treated and then immediately evacuated.

c. Restraint has often been overemphasized in forward areas. It should be necessary only in occasional instances.

d. Psychological Treatment. The unit surgeon should conduct a rapid, careful physical examination of the systems concerned in the patient's complaints. Reassurance; positive motivation; appeals to sense of duty, unit loyalty, and personal pride; and exhortation should all be fully utilized.

6. Cases to be Held and Returned to Duty: Whenever possible, hold and

- 1 -

return to duty the following:

- a. Pure physical exhaustion,
- b. Mild to moderate anxiety states.
- c. Mild so-called "concussion syndromes".
- d. Cases with vague symptomatology out of proportion to the objective signs (so-called psychosomatic cases).
- e. Cases with mild medical disease or injury with marked exaggeration of symptoms. (A good proportion of backaches, sprained ankles, etc.)
- f. Cases of demoralization, poor motivation, stragglers masked as medical or neuropsychiatric casualties, unwilling soldiers, "gold-bricks", and true malingerers.

7. Evacuation.

- a. In forward medical installations, that is in battalion aid stations and other unit medical installations, cases are to be held one or at most two days. Only those cases with frank psychosis, severe anxiety states (showing marked tremor, startle pattern, or severe panic state), or other severe incapacitating psychiatric casualties should be evacuated.
- b. The decision that a soldier is to return to duty is the responsibility of the Medical Officer. The realities of combat are such that the soldier should not, in fairness, be asked to state that he "feels well enough" to return to the line. Medical Officers must have the force and courage to make and carry out such decisions without requesting acquiescence from the patient.
- c. Reasonable capability for combat should be the final criterion. If present, the soldier is usable and should be returned to combat. Mere vocal protestation of inability or unwillingness on the part of the soldier should not be considered as a valid reason to evacuate him.
- d. Medical channels should not be used for the evacuation of primarily administrative or disciplinary problems under a medical label. Ineffectuals and stragglers are a command responsibility and should be sent to duty, to the stockade, or should be recommended for administrative re-assignment or reclassification by the unit commander.

8. Expected Results. With proper handling, unit surgeons should be able to hold and salvage for full duty as many as 90% of the soldiers without wounds or definite medical disease who apply for medical care during combat.

9. Terminology. In all neuro-psychiatric casualties the E.M.T. will show only the designation "Exhaustion" without qualifying terms. Additional information about the patient can be sent under separate cover.

M. P. RUDOLPH,
Colonel, MC,
Surgeon.

- 2 -

HEADQUARTERS SEVENTH ARMY
Office of the Surgeon
APO 758 US ARMY


MPR/fjm

25 August 1944

CIRCULAR LETTER NUMBER 5

CONSERVATION OF MANPOWER

1. The primary function of the Medical Department is the conservation of manpower. This is accomplished by returning sick and injured military personnel to duty in the shortest possible period of time. All other considerations are secondary.
2. Patients must be retained and treated in, and returned to duty from, the most forward echelon of medical service possible consistent with sensible professional practice and the existing tactical situation. Patients obviously not returnable to duty without fixed hospitalization will be evacuated as soon as possible after becoming transportable. Medical installation commanders will not be asked to immobilize their stations, but they are asked to exercise good judgment in choosing a middle ground between immobilization of their station and conservation of manpower at the front.
3. To assist in the conservation of men, the Army Medical Service has established provisional Venereal Disease, Neuropsychiatric, and Convalescent Canters, pending the arrival of more suitable installations in this area. These have been organized with a minimum of personnel and equipment and, under trying and difficult conditions. It is urged that they be used to their maximum capacities but not flooded with cases that can be cared for in more forward installations without prejudice to the forward installation or to the health of the patient.
4. Holding relatively minor cases in installations provided therefor within the Army area will result in better care for the more seriously sick and wounded; maintain a higher organizational efficiency; require fewer replacements; and conserve hospital ships urgently needed for other theatres.
5. The medical service furnished to date has been better than excellent. This is intended as a reminder to all Medical Officers that in a rapidly moving campaign of the type we now are fighting, the tendency is to relax the control of short term cases in the interest of movement. This must not occur. Keep your men on the firing line.


M. P. RUDOLPH
Colonel, MC,
Surgeon.

DISTRIBUTION:

One (1) each Medical Officer.

HEADQUARTERS SEVENTH ARMY
APO 758 US ARMY

CIRCULAR)
:
NUMBER 14)

30 August 1944
CLASSIFICATION CANCELLED
by authority of
THE SURGEON GENERAL
DATE 8-2-1960
1044
ROBERT M. C.

STANDARD OPERATING PROCEDURE FOR THE ROUTING OF NEUROPSYCHIATRIC
CASES IN SEVENTH ARMY UNDER NORMAL OPERATING CONDITIONS

1. The 1st Platoon of the 616th Clearing Company is designated as the Treatment Center for neuropsychiatric casualties.

a. Admission Policy:

- (1) All cases with primary EMT diagnosis of Exhaustion or other neuropsychiatric diagnosis will be sent directly to this Center and to no other medical installation.
- (2) Cases in Army Hospitals in which a diagnosis of neuropsychiatric disorder is made will be transferred to the Neuropsychiatric Center immediately without further treatment, unless such transfer is prohibited by a primary, serious medical or surgical condition requiring continued specialized care. Cases which are violently disturbed should be evacuated directly to Base Hospitals when possible, without transfer through the Center.

b. Consultation Services will be available for:

- (1) Ambulatory patients brought to the Center from Corps or Army dispensaries.
- (2) All medico-legal cases arising in Corps or Army and requiring psychiatric consultation. (See Circular Number 13 on psychiatric consultation in legal cases).
- (3) While a limited number of out-patient consultations can be handled for the Evacuation Hospitals and Field Hospitals at the Center, it will not be the policy of this Center to furnish routine consultation service for such installations.

c. Discharge Policy:

- (1) Cases returning to duty will be re-equipped at the Center (except for arms) and returned directly to their units without passing through replacement centers or casual battalions. Divisions are instructed to receive soldiers belonging to their

own or attached units who are thus returned to duty, and provide for further transportation to their individual units. Patients who cannot be re-equipped will be returned to duty through replacement centers.

- (2) Cases requiring Base hospital care will be discharged from the Neuropsychiatric Center to designated Base Section medical installations without the intermediation of any other Army medical installation.

By command of Lieutenant General PATCH:

ARTHUR A. WHITE,
Brigadier General, GSC,
Chief of Staff.

OFFICIAL:

W. G. Caldwell
W. G. CALDWELL,
Colonel, AGD,
Adjutant General.

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HEADQUARTERS SEVENTH ARMY
Office of the Surgeon
APO 758

CLASSIFICATION CANCELLED
by authority of
MAJOR FRANK B. HUGHES, MC
DATE 27 10 1950
Historical 26 September 1948

CIRCULAR LETTER NO. 6

TETANUS	I
TRENCH FOOT	II
MALARIA	III
WOUND INFECTIONS	IV
DIPHTHERIA	V
HEPATITIS	VI
REDESIGNATION OF CIRCULAR LETTER	VII

I - TETANUS.

1. An increase in the incidence of tetanus may be expected in this Theater. Already five (5) cases have been reported from the POW Hospital. Any wound, regardless of size or location, is a potential source of tetanus, particularly small puncture wounds.

2. Prophylaxis.

a. The Emergency Medical Tag and Field Medical Record will be carefully checked. For U.S. and Canadian personnel, if there is no record of the administration of toxoid, or if there is any doubt as to its previous administration, 1 cc of tetanus toxoid will be given and recorded.

b. Members of the French and other Allied Forces, civilians, and POW's will receive three-thousand (3000) units of tetanus anti-toxin intramuscularly after appropriate tests for sensitivity. A syringe containing 1 cc of 1:1000 epinephrine should always be ready whenever anti-toxin is given.

c. Early adequate debridement is necessary.

3. Treatment.

a. The patient is isolated in a quiet protected area.

b. Anti-toxin, locally ten-thousand (10,000) units are injected about the wound. Parenterally tetanus anti-toxin must be given early and in adequate amounts. The initial dose is sixty-thousand (60,000) units intravenously. In severe cases this is repeated in twenty-four (24) hours. On the second day and every day thereafter, until definite improvement occurs, five-thousand (5,000) units are given either intravenously or intramuscularly.

- I -

- c. Anti-toxin should not be given intrathecally.
- d. An hour after local injection of anti-toxin, the wound is redebride widely if any evidence of infection is present.
- e. Penicillin. There are no available data as to the efficacy of penicillin against tetanus. There is no contraindication to its use with the anti-toxin and there is also frequently other infection present. It is to be given as prescribed for anaerobic myositis: one-hundred-thousand (100,000) units intravenously followed by twenty-five-thousand (25,000) units intramuscularly every three (3) hours.
- f. Sedation. The barbiturates are recommended by mouth, Levine tube, intravenously, or subcutaneously.
- g. Sulfonamides are of no demonstrable value and are less efficacious than penicillin against the associated infection.
- h. Nourishment. The use of a Levine tube is recommended for the administration of nourishment and maintenance of fluid balance. When possible this is preferable to the intravenous administration of fluids. Two-thousand (2,000) to four-thousand (4,000) calories should be provided daily.
- i. Pneumonia. The careful changing of position of the patient when he is under sedation, the prevention of too deep sedation, and the maintenance of a clear and dry airway aid in the prevention of pulmonary complications. Elevation of the foot of the bed at regular intervals assists in freeing the bronchial tree of accumulated secretions. Large amounts of intravenous fluids or their rapid administration are both contraindicated. Fluids should be adequate but not excessive.
- j. Tracheotomy may be necessary if there is severe laryngeal edema.

II - TRENCH FOOT.

1. Cases of recurrent trench foot are already appearing in Army hospitals. Unless there are obvious surgical complications, cases of trench foot, new and recurrent, will be admitted to the Medical Service. It is the responsibility of every medical officer to examine the feet of his patients and instruct them in the proper care of the feet. Trichophytosis, warts, ingrowing nails, abrasions and infections are to be treated as well as the condition for which the patient is admitted.

III - MALARIA.

1. Patients with recurrent malaria will be carefully studied and the following factors considered: Number, frequency and severity of attacks, general condition of the patient, type of work and position in organization, laboratory studies, age of patient, total time of disability and hospitalization, and adequacy of previous therapy. Every effort must be made to keep these patients in the forward area, and by such careful study and consideration of each case it is hoped that more may be returned to duty. Those whose records are unfavorable in these respects will be evacuated to the Zone of Communication for further therapy and disposition.

IV - WOUND INFECTIONS.

1. With the onset of cold damp weather and the increase in respiratory infections, special precautions must be taken in order to maintain the low incidence of infection and high standards of wound healing that have existed in the whole theater. The initial debridement must be thorough with adequate incision and excision and complete hemostasis so that the wounds are left clean and dry. Personnel should be masked when doing dressings and the patient's mouth protected. Those who have colds or sore throats should wear either a large impermeable mask or else have added protection in the ordinary mask. Hands must be washed frequently and extra care taken in the protection of dressings and instruments and in maintenance of "sterile technique". Frequent change of dressings increases the incidence of wound infections.

2. The curve of hospital infections always rises during the winter months. In view of the increase in some of the more severe types of infections the Chiefs of Sections should review the principles of asepsis and wound contamination and infection with their staffs and provide instruction and demonstrations for the nurses and enlisted personnel. Particular emphasis should be placed on the early symptoms and signs of the clostridial infections, the significance of pain - often with sudden onset, loss of appetite, prostration and mental change, rapid pulse, and temperature. This will facilitate the early recognition of these conditions so that proper therapy may be instituted without delay.

V - DIPHTHERIA.

1. Recent reports indicate that the incidence of diphtheria has risen sharply in Alsace and Western Germany and that there has been a steady increase for the whole country during the past four (4) years. The season for the occurrence of diphtheria is at hand. Treatment will be carried out in conformity with recommendations made in Circular Letter 37, Office of the Surgeon, NATOUSA, 2 October 1943.

Cir Ltr No. 6, Office of the Surgeon, Hq Seventh Army, 26 Sept 1944, Cont'd:

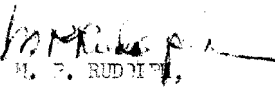
2 It has been demonstrated that penicillin is a valuable adjunct in the treatment of diphtheria because it aids in clearing the local infection and seems to decrease the number of convalescent carriers. Therefore, immediately after the therapeutic dose of anti-toxin has been administered twenty-thousand (20,000) units of penicillin intramuscularly will be given and this dosage repeated every three (3) hours until a total of four-hundred-eighty-thousand (480,000) units has been reached.

VI - HEPATITIS.

1. In Army hospitals there is usually difficulty in obtaining an adequate amount of protein in the diet of patients ill with hepatitis. It is suggested that three (3) units of dilute plasma be fed daily to these patients. This will add forty-five (45) to fifty (50) grams of excellent proteins to the diet. Plasma has a salty taste faintly resembling cod-liver oil. This taste may be masked by the addition of various condiments or juices. The usual intravenous route may be used if desired.

VII - REDESIGNATION OF CIRCULAR LETTER.

1. Circular Letter No. 4, Office of the Surgeon, Headquarters Seventh Army, dated 25 August 1944, is hereby redesignated Circular Letter No. 5.


M. P. RUDDITT,
Colonel, MC,
Surgeon.

DISTRIBUTION:

All Medical Units.

- A -

HEADQUARTERS SEVENTH ARMY
Office of the Surgeon
APO 758

DECLASSIFICATION CANCELLED
by authority of
THE SURGEON GENERAL
APR 21 1980
28 September 1971
MAJOR FRANK
H. B. 1158

CIRCULAR LETTER NO. 3

STANDARD OPERATING PROCEDURE FOR THE USE AND CONTROL OF
SURGICAL AND ALLIED TEAMS OF AN "AUXILIARY SURGICAL GROUP."

1. GENERAL

a. Composition and Function: An auxiliary surgical group is composed of general surgical, orthopedic, neurosurgical, thoracic and maxillo facial surgical teams, shock and miscellaneous teams. The activities of the group are controlled by a **group headquarters**. At present, slightly more than one-half of the *** Auxiliary Surgical Group is attached to the Seventh Army. This includes a detachment of its **group headquarters**. The function of the group is to supplement the surgical service of hospitals. Primarily the teams will function in Army installations but may also be used in hospitals within the base section. See also, Circular Letter No. 3, Headquarters Seventh Army, Office of the Surgeon, cs.

b. Personnel: The surgical teams consist of six persons as follows: (1) Surgeon; (2) assistant surgeon; (3) anesthetist; (4) operating room nurse; and (5) 2 enlisted surgical technicians. The surgeon is the officer in charge of the team. The shock team is normally composed of one officer, one nurse, and two enlisted technicians.

c. Equipment: The teams are equipped with all essential surgical instruments and an anesthesia apparatus. Tentage for quarters is a part of their organic equipment. They are not self-sustaining, and are dependent upon the installation in which they are working for messing and housekeeping facilities.

d. Transportation: Teams routinely have their own transportation. The number of vehicles is very limited and when teams are employed in evacuation hospitals, they will seldom have their own transportation. Transportation furnished is primarily for the movement of teams, and only in emergencies will it be used for other purposes.

e. Employment in Evacuation Hospitals: In these installations the teams will function under the supervision of the chief of the surgical service.

f. Employment in Field Hospitals: In these installations the surgeon designated by group headquarters will be charged with the responsibility to the hospital commander for the surgical service of that hospital.

- 1 -

Cir Ltr No. 7, Office of the Surgeon, Hq Seventh Army, 28 Sept 1944, Cont'd:

2. ADMINISTRATION.

The group headquarters is responsible for the administration of the group. Personnel records will be maintained in that office.

3. COORDINATION.


All matters pertaining to the professional service and employment of these teams in Army installations will be coordinated through the Army Surgeon.

4. REQUEST FOR TEAMS.

Request for teams to be placed on Temporary Duty with the Unit will be made by the hospital concerned through the office of the Army Surgeon. This Office will advise group headquarters of the need for teams at various hospitals. Request for teams should, if possible, be anticipated several hours in advance in order to facilitate their movement.

5. RELEASE OF TEAMS.

The number of teams available is limited, and all hospital commanders are enjoined to cooperate in the maximum utilization of the personnel of an auxiliary surgical group. To this end, the personnel will be released from hospitals and returned to their group headquarters as soon as their mission has been accomplished, in order that they may be readily available for assignment elsewhere.


M. P. RUDOLPH,
Colonel, MC,
Surgeon.

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All mod bns, Seventh Army

HEADQUARTERS SEVENTH ARMY
APO 758 US ARMY

9 October 1944

CIRCULAR)
NUMBER 20)

TRENCH FOOT

CLASSIFICATION CANCELLED
by authority of
THE SECRETARY GENERAL
DATE 200 8 200
MAJOR FRANK A. ROGERS, MC
Historical Division

1. General

Trench foot was a very common and extremely disabling injury during the winter months of World War I and during the Italian Campaign of 1943, and resulted in a serious loss of manpower. It is preventable and all organizations and unit commanders will become familiar with the measures required for its prevention. It is the direct responsibility of commanding officers to provide repeated instruction to all personnel of their command on the care of the feet and the prevention of trench foot. Frequent inspections will be made to ensure that these instructions are being properly carried out.-

2. Trench Foot

a. Poorly fitting shoes and socks, leggins, or other articles tending to restrict muscle or joint action and interfere with the circulation of blood in the feet, sweaty feet, blisters or chafing, and athlete's foot or ringworm, are all contributing factors to the development of trench foot. All may be avoided in large measure by general preventive measures:

- (1) Proper fitting and broken-in shoes.
- (2) Proper fitting, clean, dry socks.
- (3) Proper hardening of feet for marching.
- (4) Proper trimming of toenails.
- (5) Cleanliness of the feet.
- (6) Proper sanitation in common baths.
- (7) Frequent inspection of feet and prompt correction of faults observed.

Cir #20, Hq Seventh Army
9 October 1944, cont'd

b. Trench foot is produced by standing or sitting about with cold wet feet. Intense cold is not a necessary factor as the condition may develop at temperatures as high as 55 degrees F, especially recurrent cases. The most important factors are cold, moisture, inactivity, and constriction of blood circulation.

c. The symptoms are heavy, woody, numb feet, insensitive to feeling of touch or pain. These areas are most marked around the toes, and the feet are usually cold to touch, swollen and waxy-white in color, with some bluish mottling present. When the feet are warmed they become red, hot, swollen, and painful, and blisters may develop.

d. Once trench foot has developed the feet are not to be massaged or warmed, but are to be kept elevated, cool, and dry. The patient will not be permitted to walk and will be sent at once to a hospital.

3. Prevention

a. Under combat conditions every available opportunity will be taken to remove shoes; clean, dry, warm, powder, and massage feet; and to change, wash, and dry socks.

b. Combat boots should be large enough so as not to constrict the feet. As new pairs are issued they should be sufficiently large to permit two (2) pairs of light weight or one (1) pair of heavy socks without constriction.

c. When rubber boots or boots with rubber lowers are worn, the feet sweat. Particular instructions will be given, therefore, so that whenever such boots are worn a dry felt insole will be used, if available, and two (2) pairs of wool socks worn in order to absorb excess perspiration.

d. Socks may be dried by being kept inside the helmet next to the head, inside the shirt next to the body, or pinned inside the field or combat jacket.

e. Troops will carry three (3) pairs of socks in addition to the pair being worn.

f. If troops have to stand or sit in one place they should exercise their feet and legs vigorously to maintain a normal circulation and warm feet.

Cir #20, Hq Seventh Army
9 October 1944, cont'd.

Under no circumstances will troops be permitted to sleep with their shoes^{g.} on if the shoes of feet are wet. This is one of the chief causative factors of trench foot, as the circulation is constricted and the socks and feet are prevented from drying. .

By command of Lieutenant General PATCH:

ARTHUR A. WHITE,
Brigadier General, GSC,
Chief of Staff.

OFFICIAL:

W. G. Caldwell
W. G. CALDWELL,
Colonel, AGD,
Adjutant General.

Distribution "B"

HEADQUARTERS SEVENTH ARMY
Office of the Surgeon
APO 758 US ARMY

CLASSIFICATION CANCELLED
BY 1000000 OF
THE SECRETARY GENERAL
DATE 13 October 1944
MAJOR FRANK S. ROBERTS, MO

CIRCULAR LETTER NO. 8

BLOOD TRANSFUSIONS
USE OF SHELL NATRON CARBON DIOXIDE ABSORBENT

I
II

I - BLOOD TRANSFUSIONS.

1. Due to the frequency of bad weather, deliveries of blood by plane are becoming increasingly uncertain. It is imperative, therefore, that all units draw as much blood as possible and establish their own blood banks. Rigid economy will be practiced in demands upon the Blood Bank. Priority of delivery will be as follows:

- a. Field Hospitals.
- b. Four hundred (400) bed Evacuation Hospitals.
- c. Seven hundred fifty (750) bed Evacuation Hospitals.

2. Donor and recipient sets will be requisitioned from Medical Supply. Proper care will be given these sets and the instructions accompanying them as to care and cleaning will be followed. Clogging of the filter and pyrogenic reactions will result from careless or incomplete cleaning of the steel filter. To insure perfect cleanliness and the removal of all filbrin particles these filters should be thoroughly cleaned, then soaked in concentrated nitric acid for ten (10) to twelve (12) hours, rinsed in several changes of ordinary tap water, and finally rinsed in pyrogen free distilled water.

3. The officers of the Blood Bank are available for help and instruction at all times. Any difficulties which arise may be referred either to the Blood Bank or to this office.

4. The Blood Bank is now operating a collecting unit on a limited scale, as much "O" blood, low titre, will be furnished as is possible. (This is the universal donor) In addition, high titre "O" blood and "A" blood will be supplied for use in corresponding specific type recipients.

5. Identification tags show a ten per-cent (10%) error in the recording of blood groups, and hence can be used only as a screen in the selection of donors. Under no circumstances will they be used as the sole basis for transfusion.

6. All donor and recipient bloods will be cross matched. They will also be grouped except when the low titre "O" universal donor Bank Blood is used.

Cir Ltr No. 8, Office of the Surgeon, Hq Seventh Army, 13 Oct 1944, Cont'd:

7. In cases of hemothorax, the blood may be collected in a ~~six~~ hundred (600) cc Baxter Vacuum bottle at the time of operation by connecting the "donor set" with a piece of rubber tubing to ~~suck~~ the blood from the chest. This may then be used as a transfusion.

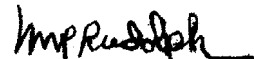
8. Ten (10) cases of anuria have occurred in this theater. Patients who develop anuria or hemolytic reactions subsequent to transfusion will be reported to this office with complete data as to identification, injury, treatment, ~~drugs,~~ plasma, and transfusions. In case of death, sections of liver and kidney, preserved in ten per-cent (10%) formalin, will be forwarded to the First Mobile Army Laboratory,

II - USE OF SHELL NATRON CARBON DIOXIDE ABSORBENT.

1. Reference Circular Letter 53, Headquarters NATOUSA, Office of the Surgeon, 31 December 1943, the use of Shell Natron, Item 1K74850 in Anesthesia apparatus is prohibited. It is intended for use with Item 93640 Oxygen Therapy Apparatus, Closed Circuit.

2. Shell Natron is an impure product and contains a high percentage of NaOH (Sodium Hydroxide). When used in an anaesthetic apparatus, it is in close contact with the face and airway resulting in burns from the high concentration of lye, and damage to the anaesthesia apparatus.

3. Item 14250, Sodium calcium hydrate, is supplied for use in the anaesthesia apparatus.


M. P. RUDOLPH,
Colonel, MC,
Surgeon,

DISTRIBUTION:

Special,

HEADQUARTERS SEVENTH ARMY
Office of the Surgeon
APO 758 US ARMY

CLASSIFICATION CANCELLED
APR 21 1950
28 December 1944
Handwritten signature

CIRCULAR LETTER NO. 16

DERMATOLOGY I
STATISTICAL REPORT, WD MD FORM 86c II

I - DERMATOLOGY.

1. General.

a. Common skin diseases comprise an appreciable percentage of admissions to the medical service in evacuation hospitals. One hundred (100) consecutive dermatological admissions fell into the following groups:

- | | |
|--------------------------|----|
| (1) Fungus, all types | 14 |
| (2) Traumatic dermatitis | 15 |
| (3) Scabies | 25 |
| (4) Others | 46 |

b. Over eighty-five per cent (85%) of the above cases were not serious enough to warrant hospitalization, and treatment could have been easily administered on an ambulatory status. To conserve hospital beds and also to conserve manpower for combat areas it is recommended that:

- (1) Unit medical officers be more circumspect in their selection of dermatological cases for hospitalization.
- (2) Diagnostic problems be referred for consultation to the nearest evacuation hospital on an out-patient basis, thus obviating the loss of several days' duty in the chain of evacuation.
- (3) Blood for Kahn tests be drawn within the division area on cases with a skin rash suspicious of secondary syphilis; so that the blood specimen rather than the patient may be sent to the rear.

c. The decision as to whether a patient needs hospital care may be, in part, decided by the type and location of the presenting lesion rather than the etiological factor. For example, a bullous lesion with secondary lymphangitis needs hospital care irrespective of whether the inciting cause is a dermatitis herpetiformis or simply an ill-fitting shoe.

2. Hospitalization.

a. Hospitalization is advised for the following cases subject to such exceptions as may arise in individual cases:

- 1. -
(Over)

Cir Ltr No. 16, Office of the Surgeon, Hq 7 Army, 28 Dec 44. Cont'd:

- (1) Ulcerative lesions,
- (2) Open weeping eczematoid lesions,
- (3) Bullous eruptions secondarily infected - especially of hands, feet.
- (4) **Fungus** infections of feet and groin - when wet and macerated.
- (5) Erythematous rashes.
- (6) Urticarial wheals that fail to respond to local therapy.
- (7) Maculo-papular lesions which are accompanied by systemic signs and symptoms (exanthemata, secondary lues).

3. Out-Patient Treatment.

a. Treatment on a Duty Status is advised in the following cases, subject to exaepctions ~~as may arise~~ *in* individual cases:

- (1) **Papular** lesions that are pruritic. These are usually scabetic and ~~comprise~~ the commonest skin lesions seen in the field. Uncomplicated scabies does not require hospital treatment. A bath followed by a three-day course of treatment and a ~~change of clothing will control most cases.~~ A small number of scabetic cases will either develop secondary furunculosis and pyoderma, or require more than a single course of sulfur ointment. These patients ~~may~~ then be hospitalized at the discretion of the medical officer.
- (2) Eczematoid lesions that are asymptomatic and present merely a thickened intact skin,
- (3) **Fungus** infections that are dry or hyperkeratotic in type.
- (4) Chronic dermatoses. Chronic skin diseases usually do not need hospital care and respond slowly, if at all, to therapy. In this category are the thickened plaques, atrophic spots and indurated lesions of psoriasis, lichen planus, acne, and chronic seborrhea. Unless they are producing definite symptoms, treatment may be deferred until such individuals are in a rest area. At ~~that~~ time they may be referred to a dermatology clinic where a rational regime of therapy may be outlined on an individualized basis.

HEADQUARTERS SEVENTH ARMY
Office of the Surgeon
APO 758

CLASSIFICATION CANCELLED
by authority of
US ARMY GENERAL
30 December 1950
MAJOR FRANK B. ROGERSON
Historical Division

CIRCULAR LETTER No.

INITIAL WOUND SURGERY I
SURGICAL MANAGEMENT OF THE WOUNDED II

I - INITIAL WOUND SURGERY.

The following excerpts are quoted from Circular Letters. These are fundamental and have proved most helpful to medical installations here and elsewhere.

"1. The keystone of successful wound management is the initial surgical operation. When this is performed correctly the complications of infection are absent or minimal and secondary suture may be carried out promptly and successfully. To coordinate the initial surgery in the forward area with the definitive surgery at the base, observance of the following principles is essential.

"a. Adequate assistance and instruments, a good light, and access to the wound that is unhampered by faulty position of the patient are basic requirements. Ample preparation of a wide field by shaving the skin will allow for extension of the incision or counter-incision.

"b. Bold incision is the first essential step in an operation on a wound. Adequate exposure is necessary to carry out excision of devitalized tissues. On the extremity the line of the incision is placed parallel with the long axis of the limb; elsewhere it follows the natural lines of skin structure. Only the devitalized skin of the margins of the wound is excised in a strip rarely wider than 2 to 3 mm. Circular defects are to be avoided.

"c. Incision and excision of the fascial layers is carried out in the same manner to give free access to devitalized muscle. Unrestricted exposure of successive anatomic layers permits the complete excision of devitalized muscle and the removal of foreign bodies. The operation on a wound is an anatomic dissection and should never be made to resemble a digital pelvic examination.

"d. The surgeon must be familiar with the blood supply of muscles, particularly large groups like the gastrocnemius-soleus muscles of the calf and respect these vessels in his dissection. Deep recesses of the wound containing foreign bodies may be approached by counter-incisions planned anatomically rather than by sacrificing normal muscle structures.

"e. Use fine hemostats. Use the finest ligatures compatible with the procedure. Include the smallest possible amount of tissue in ligating a bleeding point. Do not repeatedly bite the wound with tissue forceps. Sponge gently with pressure instead of wiping. Remaining devitalized tissue produced by the missile or by the surgeon must slough before the wound can be closed by secondary suture.

- 1 -
(Over)

"f. Large wounds in regions of heavy muscles particularly when complicated by comminuted fracture require especial care. The depths of these wounds must be opened by a long incision with counter-incision if necessary to allow free drainage of blood and tissue that may not be identified as dead at the time of debridement.

"g. Only enough vaseline gauze is used to separate the surfaces of the wound. It should be smoothly laid in the wound -- not 'packed'.

"h. Local application of sulfanilamide is a minor adjunct to surgery and is used as a fine frosting of the surfaces. It is not to be 'rubbed in'.

"i. Ether, white soap and benzene have slight but definite necrotizing effects on living muscles. Green soap, hydrogen peroxide and various other substances used as detergents have greater necrotizing effects. Physiological saline solution, petrolatum and boric acid ointment are innocuous. If a detergent is needed, white soap is the least objectionable.

"j. Old wounds (48 hours or longer) are managed in accord with the same principles except that in selected cases of established pyogenic infection and anaerobic cellulitis with toxicity the general condition of the patient to withstand radical surgery may be improved by immobilization, penicillin and repeated blood transfusions until an optimum time is selected for intervention. In postponement of surgery the advantage that accrues from the immediate drainage of septic hematomas, large masses of dead muscle and fascial plane abscesses is not to be forgotten. Postponement of surgery is not justified if clostridial myositis (gas gangrene) may be present.

2. Closed Plaster Treatment (Truetta).

a. The regimen of closed plaster management of war wounds has not been judged applicable to the field conditions of this theater. It is advisable to remove the initial dressing for inspection of the wound in all cases at least by the 15th day. Incorporation of pins or other fixation devices in the initial plaster to maintain the reduction of fractures obtained at the initial operation has been found impractical as a means of transportation splinting.

b. While the necessity for the rapid turnover of large numbers of casualties might justify an adoption of the closed plaster method of management of compound fractures, a high penalty in the form of skeletal deformity would be the inevitable result. Results obtained by secondary suture do not justify the use of closed plaster for soft part wounds.

c. Infrequent change of plaster as practiced in the theater has many advantages, particularly when it is desired to allow granulations to cover exposed bone in deep irregular wounds (Orr). It is also an accepted method of management for established infection of bone, particularly when the wound has caused an extensive loss of overlying soft parts or there is a bone defect. Small surfaces of bare cortical bone may be removed surgically when this permits closure of the defect by suture. When resurfacing by skin graft is possible in a shallow wound the bare cortical bone may be left for spontaneous sequestration.

II - SURGICAL MANAGEMENT OF THE WOUNDED.

1. Cranio-Cerebral Wounds.

"a. The incidence of infection in penetrating wounds of the skull can be further reduced. Deep infection is almost always associated with retained bone fragments demonstrable by X-ray examination. Bucky diaphragms are available for all hospitals as item #60915. If not available, a cassette tunnel and regulation grid will serve. Stereoscopic films can be made with the field X-ray unit equipped with a Cube shift. A stereoscopic view box can be assembled with two (2) illuminators and a pair of shaving mirrors mounted one on either side of a cardboard 'V'.

"b. In the repair of dura defects, living grafts of fascia or pericranium will be used in preference to preserved dura or fascia".

2. Maxillo-facial wounds.

a. Fixation of skeletal injuries, suture at the time of initial operation with provision for adequate drainage, maintenance of moist pressure dressings, and oral hygiene with irrigations of normal saline and sodium bicarbonate solution have reduced the incidence of disabling infection and mutilating deformities. Gauze moistened with saline and Penrose wicks appear more satisfactory than vaselin gauze.

b. In fractures of both the mandible and maxilla, every effort must be made to obtain and maintain proper occlusion of the bite and fixation of the fracture. This is best attained by the use of elastic traction. If there is any likelihood of nausea, it is preferable, when these patients are evacuated, to remove the elastic bands temporarily and substitute a Barton type of bandage for immobilization during the journey.

c. There are no provisions for adequate care and diet in evacuation holding units, therefore, wherever possible, these cases will be held in the hospital and sent directly to the hospital train or plane.

3. Thoracic Wounds.

"a. The prime concern in the management of penetrating wounds of the chest is the timing of operative intervention and the proper placement of various procedures in forward and rear hospitals. In the forward area the goal is the restoration of physiologic equilibrium. The complications of infection are usually delayed and as a rule, can be adequately managed at the base if they occur.

"b. The urgent physiologic disturbances that attend wounds of the chest can be controlled by needle aspiration of air and blood; aspiration of blood and mucus from the tracheo-bronchial tree; novocain injection of intercostal spaces; insertion of a catheter with a flutter valve for pressure pneumothorax; oxygen therapy and transfusion; and debridement of sucking wounds with hemostasis of intercostal vessels and approximation of deep structures of the chest wall to close the pleural opening.

- 3 -
(Over)

"c. Indications for primary thoracotomy, either by extension of the wound or by separate incision at a site of election may be narrowed to:

- "(1) Continuing intrapleural hemorrhage not controlled by hemostasis in the chest wall debridement.
- "(2) Anatomic or clinical evidence of penetration of the diaphragm.
- "(3) Traverse of, or lodgement of a missile in the mediastinum with reason to suspect visceral damage.
- "(4) Large intrapleural foreign bodies or debris that is readily accessible by extension of the wound.
- "(5) Wounds of large bronchi or the intrathoracic portion of the trachea.

"d. The following conditions are not in themselves indications for thoracotomy either by extension of the wound or by separate incision.

- "(1) Foreign bodies, i.e., metallic fragments, or rib fragments in the lung, or small fragments that may be in the pleural space.
- "(2) Hemothorax. (Evacuation of blood from the pleural cavity by suction at the time of chest wall debridement is not considered a thoracotomy.)
- "(3) Lacerated or contused lung unless there is definite evidence of continuing hemorrhage.

"e. Closed drainage of the pleural space is to be instituted following thoracotomy or extensive chest wall surgery with involvement of the parietal pleura unless definite contra-indications exist. The drainage catheter will be removed as soon as the clinical course permits, usually at the end of 48 hours.

"f. It is advisable to keep a patient with an injured lung slightly dehydrated and depleted rather than invite pulmonary edema by the too liberal use of intravenous infusions or over-transfusion.

"g. A thoracotomy incision or the extension of a missile tract should be in the postero-lateral area of the thoracic cage, rather than placed anteriorly. Considerable difficulty has been encountered with the break-down of anterior chest wall defects.

4. Large Bowel Wounds.

"a. Colostomy. Two (2) types of colostomy are constructed for the management of wounds of the large intestine. Each has its indications and these should be clearly understood by surgeons performing the initial operation. In general, the simplest procedure is chosen that is compatible with a favorable

outcome of the case. It is essential that an accurate description of what was done be incorporated in the clinical record to guide the surgeon responsible for reconstructive procedures."

- (1) Loop Colostomy. The colon is mobilized so that the exteriorized segment of bowel lies on the abdominal wall without tension. This is attained by mobilizing and preparing a sufficient length of colon so that it may be brought out readily and will lie loosely on the abdominal wall. A glass rod or suture tube passed through the mesentery under the loop is better than a piece of rubber tubing. Dry gauze is then placed about the loop of bowel; adhesions form quickly between the two, which help in maintaining the position. Dependence on sutures to hold the bowel in place leads to infection and retraction; clamps are never used. Indications:

- (a) Perforations of the ante-mesenteric portion not involving more than one-half the diameter of the bowel.
- (b) As a proximal sigmoid colostomy for wounds of the recto-sigmoid, rectum, anal region, and extensive wounds of the buttocks. The bowel is opened by adequate incision rather than completely cut across. If the faecal stream has not been wholly diverted, it may be necessary in rare cases to divide the bowel entirely after it has become well adhered.

- (2) Spur Colostomy. "The double-barrelled spur colostomy requires mobilization of the bowel to afford free ends six inches in length. These are joined by two (2) rows of sutures best placed along longitudinal muscle bands to isolate a segment of the ante-mesenteric border for subsequent crushing with a clamp. A portion of these two lines of sutures will lie below the level of the peritoneum so care must be taken not to penetrate the lumen of the gut or strangulate vessels. Indication:

- "(a) Perforations of the mesenteric border and perforation of the ante-mesenteric border larger than one-half of the diameter.
- "(b) Lacerations that necessitate resection of a segment.
- "(c) Complete transections.
- "(d) Injuries to the mesentery with non-viable segments of bowel.

"b. Cecostomy.

- "(1) Tangential perforations of the cecum may be managed by a tube cecostomy or preferably by exteriorization. Single perforations require mobilization of the bowel to look for retroperitoneal perforation.

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(Over)

- "(2) A cecostomy, even when necessary because of a direct injury to the cecum, is never to be used as a substitute for a proximal colostomy when indications for the latter are present."

c. The right colon.

- (1) Wounds of the right colon present a special problem. If the wound of the ascending colon is small and clean-cut, it is exteriorized whenever possible, or it may be repaired in two (2) layers and a large cecostomy provided. If the damage is so extensive that resection is indicated, this may be accomplished in one or two stages depending upon the extent of the lesion, the condition of the patient, and the degree of peritonitis present. The two stage procedure is safer and is advised whenever possible. A side to side ileo-transverse-colostomy is performed and the distal resected stump of ileum exteriorized well out in the right lower quadrant as a mucous fistula. A loop of transverse colon or hepatic flexure just proximal to the anastomosis is then delivered through a subcostal incision. This loop is divided at the time of operation and these ends left open. The wounded portion of the colon is exteriorized either through the lower intermuscular incision with the ileum or through the upper incision along with the loop of colon, whichever is easier.
- (2) In a one stage resection after the anastomosis and resection are completed, the open end of the remaining colon is delivered through a subcostal incision. A large fenestrated catheter may be passed through the end of the colon and through the anastomosis so as to provide decompression. The open end of the colon is closed about the catheter by a purse-string suture; it is reopened and the catheter removed within twenty-four (24) hours.
- (3) Ileostomy and the double-barrelled ileocolostomy are not advised because of the great nursing problem and difficult post-operative care often necessary with marked fluid loss, frequent dehiscence of the wound, and digestion of the abdominal wall.

"d. Perforation of the Rectum.

"Deviations from the principles established for the management of wounds of the rectum have led to serious complications. Colostomy is mandatory (not cecostomy), as also is free posterior drainage established by free opening of the para rectal space by incision of the fascia propria with resection of the coccyx when necessary. Attempts to drain the retroperitoneal space by utilizing the missile wound of the buttock have been disastrous.

"e. Wounds of Anal Canal, Perineum and Ischio-Rectal Fossa.

"Colostomy may be advisable as an adjunct to wound healing rather than an emergency life-saving measure. As such, if evacuation to the base is rare.

Gir Ltr No. 37, Office of the Surgeon, Hq 7 Army, 30 Dec 44. Cont'd:

a loop sigmoid colostomy may be postponed until the patient reaches a fixed hospital instead of immobilizing the patient in the forward area by a laparotomy. If laparotomy is performed for other indications in the forward area, a loop sigmoid colostomy should be established.

"f. Opening the Colostomy.

- "(1) A proximal sigmoid colostomy is opened at the time it is made.
- "(2) Exteriorized perforations of the colon are left open rather than clamped. Very small perforations may be sutured if desired, but left exteriorized.
- "(3) The ends of a spur colostomy may either be left open, or, if ligatures have been utilized in delivering the spur, these can remain in place for twelve (12) hours.

"g. Placement of Colostomy.

"Segments of bowel and spur colostomies are brought out on the anterior abdominal wall through separate incisions, remote from sizeable defects caused by the missile and separate from the major laparotomy incision. When a cystostomy is also necessary, a sigmoid colostomy is placed well laterally so the apertures may be kept isolated. In the presence of extensive damage to the bladder with associated injury of the pelvic colon or rectum, that will require prolonged diversion of the feces and urine and secondary trans-abdominal operation, a spur type transverse colostomy placed to the left of the mid line in the upper abdomen is recommended."

"h. Retroperitoneal wounds of the Colon.

"These wounds are debrided and direct drainage established first. Then the abdomen is opened and explored and a proximal colostomy performed. As a general rule it is preferable to explore and debride wounds of the perineum, anal region, and retroperitoneal rectum and bowel before opening the abdomen.

5. Closure of abdominal incisions.

In the closure of abdominal incisions stay sutures should always be employed. These wounds are prone to infection, therefore the skin should not be sutured. Closure by layers leaves much foreign material, which adds to the possibility of infection. When possible, the peritoneum is closed. Through and through sutures placed one-half to three-quarters of an inch apart are recommended for all other layers to complete the closure. A single strip of Penrose drain is placed along the length of the incision and the sutures are passed through pieces of rubber tubing and tied or we tied over a folded sponge to prevent cutting.

6. Reparative Surgery of the Lightly Wounded.

"a. The lightly wounded combat soldier is the most valued military asset entrusted to the care of the Medical Corps. His treatment must be carried out or

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(Over)

Cir Ltr No. 17, Office of the Surgeon, Hq 7 Army, 30 Dec 44. Cont'd:

closely supervised by surgeons with mature judgement and experience. There are no 'minor' wounds.

"b. Forward surgeons will indicate on the record or on the cast the extent of actual skin loss. At the time secondary suture is performed it is difficult to distinguish between the gaping of a low incision that can be closed by approximation and the existence of a sizeable defect that will require skin graft


"c. An increased use of splinting of soft part wounds following debridement is advisable. Circular plaster encasement if placed proximally on an extremity must be immediately bivalved to avoid constriction."

7. Amputations.

"The most important phase in the management of amputations is the functional rehabilitation of the patient by the fitting of a prosthesis. Amputation centers have been established in the Zone of the Interior for this purpose. It is the expressed desire of the Surgeon General that the early management of amputations in overseas theaters conform with the policies that have been set forth in numerous Bulletins and Circular Letters." (See Par. 5c, Circular Letter #2, Hq Seventh Army, Office of the Surgeon, 18 July 1944).

8. Joints.

The results following the treatment of wounds of joints as recommended in Per. 5 d, (6) Circular Letter #2, Hq Seventh Army, Office of the Surgeon, 18 July 1944, have been most gratifying. Reports from General Hospitals state, with rare exceptions, that when careful debridement, full exposure, removal of foreign matter and loose bone and cartilage fragments, thorough irrigation, and penicillin instillation have been carried out, and there has been proper immobilization, the wounds heal without infection. When joint suppuration has occurred, it has invariably followed incomplete debridement with poor exposure, retention of foreign bodies, or improper immobilization. The measures outlined in Circular Letter #2 will be rigidly adhered to in all wounds of the knee joint irrespective of the type of wound or the missile causing it. This large and extremely important group of wounds can be almost wholly controlled by adequate meticulous surgery performed under the protection of penicillin. These patients, on arrival at installations of the Zone of Communications should be ready for early delayed closure of their wounds, in contrast to the sepsis and joint suppuration so frequently encountered formerly.


M. P. RUDOLPH
M. P. RUDOLPH,
Colonel, MC,
Surgeon.

DISTRIBUTION:

"B"

A DISCUSSION
OF THE SALIENT ASPECTS
OF SEVENTH ARMY MEDICAL SERVICE

MEDICAL UNITS OPERATING UNDER ARMY CONTROL
AT BEGINNING OF CAMPAIGN:

52d Med Bn, Hq & Hq Det (Sep)
 376 Med Coll Co
 377 Med Coll Co
 378 Med Coll Co
 682 Med Clrg Co
 56th Med Bn, Hq & Hq Det (Sep)
 885 Med Coll Co
 886 Med Coll Co
 887 Med coil co
 891 Med Clrg Co
 *58th Med Bn, Hq & Hq Det (Sep)
 676 Med Coll Co
 389 Med Coll Co
 390 Med Coll Co
 514 Med Clrg Co
 *164th Med Bn, Hq & Hq Det (Sep)
 388 Med Coll Co
 675 Med Coll Co
 678 Med Coll Co
 638 Med Clrg Co
 181st Med Bn, Hq & Hq Det (Sep)
 441 Med Coll Co
 674 Med Coll Co
 677 Med Coll Co
 616 Med Clrg Co
 582d Ambulance Co
 *599th Ambulance Co
 *600th Ambulance Co
 10th Field Hospital
 11th Field Hospital
 9th Evacuation Hospital
 11th Evacuation Hospital
 27th Evacuation Hospital
 51st Evacuation Hospital
 59th Evacuation Hospital
 93rd Evacuation Hospital
 95th Evacuation Hospital
 7th Medical Depot Co
 1st Army Med Lab
 2d Convalescent Hospital
 17th Veterinary Evacuation Hospital
 45th Veterinary Co
 2d Auxiliary Surgical Group
 10th Malaria Survey Unit
 136th Malaria Control Unit
 "T" Vet Food Inspection

* Reverted to control of Base Sections

MEDICAL UNITS OPERATING UNDER ARMY CONTROL
AT THE END OF 1944:

UMT	LOCATION
9th Evacuation Hospital	Sarrebourg, France
11th Evacuation Hospital	Lorquin, France
27th Evacuation Hospital	Baccarat, France
51st Evacuation Hospital	St Die, France
59th Evacuation Hospital	Mutzig, France
93rd Evacuation Hospital	Dieuze, France
95th Evacuation Hospital	Mutzig, France
116th Evacuation Hospital	Sarrebourg, France
117th Evacuation Hospital	Phalsbourg, France
132d Evacuation Hospital	Mutzig, France
2d Convalescent Hospital	Sarrebourg, France
#17th Veterinary Evac Hospital	Grenoble, France
VD Hosp (Prov) (1st Plt 616th Clr Co)	Sarrebourg, France
NP Hosp #1 (Prov) (2 Plt 616th Clr Co)	Sarrebourg, France
NP Hosp #2 (Prov) (682d Clr Co)	Hagenau, France
10th Field Hospital, Hq & Hq Det	Dieuze, France
Unit #1	Dieuze, France
Unit #2	Inswiller, France
Unit #3	Insming, France
11th Field Hospital, Hq & Hq Det	St Marie, France
Unit #1	St Marie, France
Unit #2	Ribeauville, France
Unit #3	Le Hohweld, France
54th Field Hospital, Hq & Hq Det	Drulingen, France
Unit #1	Drulingen, France
Unit #2	Diemerdingen, France
Unit #3	Drulingen, France
*57th Field Hospital, Hq & Hq Det	Saverne, France
Unit #1	Brumath, France
Unit #2	Surbourg, France
Unit #3	Oberbronn, France
52d Med Bn (Sep), Hq & Hq Det	Saverne, France
376th Med Coll Co (Sep)	Saverne, France
377th Med Coll Co (Sep)	Dorlisheim, France
378th Med Coll Co (Sep)	Gottesheim, France
**55th Med Bn (Sep), Hq & Hq Det	Saarable, France
494th Med Coll Co (Sep)	Saarable, France
496th Med Coll Co (Sep)	Siewiller, France
650th Med Clrg Co (Sep) (2d Plt)	Saarable, France
56th Med Bn (Sep), Hq & Hq Det	Wasselonne, France
885th Med Coll Co (Sep)	Wangenbourg, France
886th Med Coll Co (Sep)	Wasselonne, France
887th Med Coll Co (Sep)	Altkirch, France
891st Med Clrg Co (Sep) (1st Plt)	Wangenbourg, France
891st Med Clrg Co (Sep) (2d Plt)	Oberhoffen, France

***166th Med Bn (Sep), Hq & Hq Det	Hochfelden, France
431st Med Coll Co (Sep)	Hochfelden, France
619th Med Clrg Co (Sep)(1st Plt)	Hochfelden, France
181st Med Bn (Sap), Hq & Hq Det	Sarrebourg, France
441st Med Coll Co (Sep)	Sarrebourg, France
674th Med Coll Co (Sep)	Sarre Union, France
677th Med Coll Co (Sep)	Sarrebourg, France
650th Med Clrg Co (Sep)(1st Plt)	Mutzig, France
433rd Med Bn (Sep), Hq & Hq Det	Hagenau, France
619th Med Clrg Co (Sep)(2d Plt)	Hagenau, France
391st Med Coll Co (Sep)	Mutzig, France
392d Med Coll Co (Sep)	Hagenau, France
393rd Med Coll Co (Sep)	Hagenau, France
7th Medical Depot Co (Dump 313)	Epinal, France
Advance Section (Dump 311)	Sarrebourg, France
548th Ambulance Co	Sarrebourg, France
582d Ambulance Co	St Die, France
589th Ambulance Co	Sarrebourg, France
591st Ambulance Co	Strasbourg, France
596th Ambulance Co	Hochfelden, France
597th Ambulance Co	Hochfelden, France
1st Army Med Laboratory	Sarrebourg, France
1st Aux Surg Group (Hq & Hq Det)	Lixheim, France
2d Aux Surg Group (Hq & Hq Det)	Lixheim, France
"T" Veterinary Det (FI)	Sarrebourg, France
# 45th Veterinary Co (Sep)(- 1st Plt)	Gap, France
## 1st Plt	Nice, France

* On temporary loan from Continental Advance Section.

*** Attached to XV Corps.

Attached to VI Corps.

Attached to First French Army

Attached to 44th AAA Brigade

OPERATIONS

Early in October, 1944, it became apparent to the Surgeon, Seventh Army, that good medical service was being affected by deficiencies in the Tables of Organization of some of the medical units, and that the esprit and morale of some of the units was affected by inactivity. To illustrate: Field Hospitals complained of insufficient technicians; division surgeons found needs for additional litter bearers; and Army Collecting Companies had little for the station section to do.

Because of these deficiencies, based on experiences in Africa, Sicily, and Italy, and those of Seventh Army during August and September in France, the Surgeon organized for Army medical service the plan described below. Basically, the plan called for the provision of enough medical troops to perform area medical service in an area for which a definite responsibility was laid down.

1. For medical support of Corps troops in each Corps, one (1) Hq/Hq Det, Med Bn (Sep) with two (2) Collecting Cos. (Sep) and one (1) Clearing Co. (Sep).

2. To clear division clearing stations of a Corps and to furnish one (1) 250-bed Neuropsychiatric Center for the same Corps, one (1) Hq/Hq Det, Med Bn (Sep), with three (3) Collecting Cos. (Sep) and one (1) Clearing Co. (Sep) plus two (2) Ambulance Cos. (Sep).

3. As an Army reserve, and to furnish routine medical and ambulance service to isolated separate units who had no medical personnel, to furnish similar emergency service in the Army area, and to furnish one (1) 250-bed Venereal Disease hospital for all troops, one (1) Hq/Hq Det, Med Bn (Sep) with, as a minimum one (1) Collecting Co (Sep) and one (1) Clearing Co (Sep).

4. To attach to Hq/Hq Det, Med Bn (Sep) for administration, supply, and operations, all separate companies as described above. Corps battalions were to be attached for operations only.

5. To withdraw Field Hospitals from Corps control and assign the commander of each Field Hospital the mission of direct support of designated divisions for non-transportable casualties.

At the close of the year there was definite assurance that sufficient medical troops were to be allocated to allow completion of the above plan and also enable the Surgeon to provide an Army reserve battalion of a headquarters, three (3) Collecting Companies, two (2) Clearing Companies, and two (2) Ambulance Companies.

A Headquarters Medical Group was not contemplated. It was felt that **no necessity existed** for such a unit since the functions of such a group could be and were being performed either by the Battalion Clearing Corps or by the Operations Section of the Surgeon's Office.

The Operations Section of the Surgeon's Office is responsible for supply, hospitalization, evacuation, and plans and training. Chief of the Section is the Operations Officer. He has as his assistants a medical supply officer, hospitalization officer, and an evacuation officer.

The Medical Supply Officer is actually the Army Medical Depot Commander, who also serves as an Army Staff officer. The remainder of the Section is rounded out by three (3) enlisted men.

The Corps Medical Battalion, composed of Hq & Hq Det (Sep) two (2) Collecting Cos (Sep) and one (1) Clearing Co (Sep) allows sufficient flexibility. Corps surgeons have had no difficulty in performing their normal mission.

The Medical Battalions clearing the Corps maintained excellent esprit, and to date there has been no evidence of failure in the internal administration of these units considering the fact there are as many as eight (&) separate companies attached to one headquarters. All personnel has been fully utilized. Station section personnel has been used to augment Field Hospitals, litter section personnel on direct call, division surgeon to the Army Medical Battalion commander clearing his division, and has been used to augment regimental medical detachment litter bearers.

The Clearing Companies have been profitably occupied in the care of neuro-psychiatric casualties. There has never been any difficulty in maintaining active ambulance sections or Ambulance Companies.

At the close of the year no Army reserve battalion has been organized.

EVACUATION

Evacuation is controlled by the Operations Section of the Surgeon's Office through the supporting Medical Battalion. All Ambulance Companies are under control of Medical Battalions (Sep), assigned to Army, there being no intervening headquarters.

Liaison is kept simple and direct, and all necessary information on evacuation is available to the Surgeon at all times. The flow of casualties from the Division Clearing Stations to Evacuation Hospitals is based on the casualty rate at the

Clearing Station, *-"Surgical lag", and **beds** available at the hospitals. This information is obtained from personnel of the supporting Medical Battalion stationed at the Division Clearing Stations and Evacuation Hospitals.

The casualty rate and surgical *lag* figures are transmitted at regular intervals to the Battalion Headquarters, advance ambulance control points, and the Operations Section of the Surgeon's Office. Through this system a constant and steady flow of casualties to the Evacuation Hospitals has been maintained. Overloading of any one hospital has been avoided, and hospitals are at all times in position to give the casualties prompt and early treatment.

MEDICAL SUPPLY

Dual Function of the Commanding Officer of the Depot as Army Medical Supply Officer. In the operation to date the Commanding Officer of the Depot has acted in the dual capacity of Army Medical Supply Officer. This arrangement has proven entirely satisfactory and has eliminated much confusion relative to maintenance inventories; for all information furnished relative to "on hand" and "due" figures is immediate and up-to-date. It has also reduced the necessity of certain personnel; namely, three (3) officers, one (1) warrant officer, and four (4) or more enlisted men.

Optical Supply. The work of this unit has been especially gratifying. Since the beginning of operations in Southern France the work has shown a steady increase as noted below:

<u>Month</u>	<u>No. of Jobs Completed</u>
# September	45
# October	795
November	1072
December	1399
# - During the months of September and October all work was done with a small portable (hand) unit. The large basic optical unit was set up for operation 1 November 1944.	

Maintenance. After the rapid advance from the beaches of Southern France, units began to turn in items to the Repair and Maintenance Section of the Depot, and in November the work assumed outstanding proportions for a Field Medical Depot. Below are the figures relative to the value and weight of the items returned to service since that month:

* - See Section VIII, Surgical Lag and Bed Capacity.

November:

Returned to stock	Value - \$2,186.04
	Weight - 2.16 tons
Returned to Organizations	Value - \$3,963.21
	Weight - .83 tons
Total	Value - \$6,149.25
	Weight - 2.99 tons

December:

Returned to stock	Value - \$16,982.15
	Weight - 14.24 tons
Returned to Organizations	Value - \$ 3,285.61
	Weight - 1.17 tons
Total	Value - \$20,267.76
	Weight - 15.41 tons

Requisition and Tonnage Data. It is felt that the tonnage and requisition figures for this operation would be of interest, and are listed below:

<u>Month</u>	<u>Requisitions Processed</u>	<u>Tonnage Issued</u>	<u>Tonnage on Hand the Last Day of Each Month</u>
August	399	64.51	52.14
September	958	149.79	141.52
October	2373	265.47	201.44
November	2579	356.81	229.99
December	2455	370.31	359.50
Total	5764	1206.89	

USE OF THE FIELD HOSPITAL

Based on experiences of Seventh Army in Sicily, and Fifth Army in Italy, Field Hospitals functioning in separate platoons have been used for non-transportables adjacent to the Division Clearing Stations throughout the Southern France and German campaigns. Full development in the utilization of the Field Hospital platoon for second echelon medical service was attained by Fifth Army, and this plan has been adhered to by Seventh Army.

By reduction in platoon tentage and housekeeping equipment from a 100 to 50-bed size, and by augmentation in certain items of medical supply and equipment, a well-equipped mobile unit was formed which meets all the requirements for good forward surgery without encumbrance to Clearing Stations.

A unit is established in immediate proximity to the Clearing Station, within litter carry by hand distance, so

that all non-transportable cases and those needing resuscitation before further travel may be admitted within a few moments of arrival at the Clearing Station with a minimum of handling.

One (1) Field Hospital usually covers two (2) Divisions. One (1) of the three platoons is held in reserve so that, as a Division moves, this platoon leap-frogs the working platoons and establishes itself on the new site with the Clearing Station. A small section of a working platoon may be left as a holding unit until all patients can be evacuated, while the major working part of the unit moved with the division.

Each unit has identical equipment, and is designed for major definitive surgery and post-operative care up to twelve (12) days. The intrinsic personnel of each unit consists of the unit commander, one (1) MAC officer, three (3) medical officers, and six (6) nurses. Surgery, and the care of patients is under the direction of attached teams from an Auxiliary Surgical Group. The teams are attached rather than assigned to permit fluidity, rapid re-allocation as necessary, and economical and efficient use of highly-trained surgeons and their associates.

In order to keep abreast of the work, three (3), four (4), or five (5) such teams are usually required, depending on the influx of casualties. The three (3) medical officers of the platoon assist in pre- and post-operative care of the patients, and sometimes substitute on the teams. The nurses are continually overworked as all patients treated in one of these units are of the type that ordinarily require, in civil life, two or three nurses a day for each patient.

Our experience has been that from 200-450 patients will pass through all three units of a Yield Hospital during a month. Forty (40) to fifty (50) per cent of these will be sent back to Evacuation Hospitals after adequate resuscitation. This group comprises head, maxillo-facial, most of the extremity, and about sixty (60) to seventy (70) per cent of the chest cases. These patients are examined, blood and plasma administered, nourishment and rest given, and splints and dressings adjusted or applied. Those with abdominal and thoraco-abdominal wounds, many with buttock wounds, and those with more serious chest, maxillo-facial, and extremity wounds, require definitive surgery.

Thus, the Field Hospital platoon, working beside the Division Clearing Station, performs three (3) invaluable functions: (1) Cares for and renders prompt and expert surgical treatment to non-transportable wounded, (2) Renders transportable, by skilled, resuscitative measures, many who are initially non-transportable, (3) Screens out cases requiring resuscitation and long and arduous surgery from the Evacuation Hospitals, thus lightening the load on them and increasing their capabilities.

Medical cases are not admitted to Field Hospitals functioning in this manner.

The usual over-all monthly mortality rate, based on all admissions, averages 12-14 per cent, while the post-operative mortality rate on those patients held for operation is expected to be approximately 18-25 per cent. These figures are amazingly constant when screening is conscientiously performed. Under usual conditions Field Hospital platoons should never be made into a forward Evacuation Hospital, though it is always recognized that the extent of screening will depend on the pressure of work at hand, nearness of Evacuation Hospitals, and the condition of available roads.

It has been thought by some that the platoon commander of each Field Hospital unit should be an experienced surgeon, and that he should also be chief surgeon in the unit. We do not agree with this. A platoon commander has enough to do to handle the administration and movements of his platoon, and the services of a good surgeon are therefore lost.

To prevent confusion, it has already been recommended that this type unit be re-designated as "Field Hospital, Non-transportable Surgery".

TREATMENT OF NEURO-PSYCHIATRIC CASUALTIES.

Within Division:

1. In order to attain the lowest possible occurrence rate for psychiatric casualties in combat units it is necessary to utilize preventive measures to the fullest extent. It is of the highest importance that command assume responsibility to achieve this end.

2. The large experience built up during the Tunisian, Sicilian, and Italian campaigns, demonstrates conclusively that effective command control exercises a highly-beneficial effect in reducing psychiatric rates.

3. Effective command control entails continued interest in this problem. It implies the maintenance of high standards of morale and leadership in each combat unit. Inadequate leaders, commissioned or non-commissioned, must be removed the instant their inability to lead troops in combat becomes apparent. Command must assume responsibility for the handling and disposition of "unwilling soldiers, stragglers, evaders, and chronic offenders against military discipline". Cases as described above should not be allowed to enter medical evacuation channels. Experience has repeatedly shown that the above points are the most important factors in the prevention of psychiatric casualties.

4. Battalion **surgeons** are the most important of all medical officers who eventually treat psychiatric casualties. They are in position to salvage the greatest **number** as they are the **first** to see the case. They must be indoctrinated in the maintenance of a realistic attitude toward such casualties, consistent with the maintenance of man-power during combat. This implies the practice of rigid diagnostic standards and good judgement in treatment. Unwilling or poorly-motivated **soldiers** must not be **confused** with true psychiatric casualties. Soldiers who are fit to continue in combat must not be evacuated. Mild psychiatric casualties should be held, treated, and **returned** to their units from the aid station. Battalion surgeons must exercise **care** not to mis-label psychiatric casualties with organic diagnoses. Such mistaken diagnoses provide the soldier with a ready-made rationalization to avoid further combat, and **greatly** hamper proper psychiatric treatment in the rear.

5. Regimental surgeons must **supervise** constantly the performance of their battalion surgeons in regard to the handling of psychiatric casualties. Their position affords them an **excellent opportunity** to **exercise** control over the occurrence of such casualties.

6. The Division Psychiatrist usually **finds** it best to operate a **small** treatment station in the Division Clearing Station. Here, emphasis is directed toward eventual return to duty of the casualty. Extensive investigation and questioning is to be avoided in most instances. A short period of rest with adequate sedation and nutritional restoration usually suffices to restore combat efficiency in a large number of psychiatric casualties at this level.

7. Diagnoses of medical cases should be frequently spot-checked. In this **way** many cases with psychosomatic syndromes, **without** organic basis, can be detected. Such cases can be held, **treated**, and returned to combat from the Clearing Station in many instances. It has become generally recognized that psychiatric casualties are more easily salvaged the further forward they are held and treated.

Within Army:

1. In Seventh Army, Psychiatric treatment centers have been established by utilizing Army Clearing Stations. Additional enlisted personnel and equipment were provided over and above usual TO & E of such installations in order to furnish adequate facilities for the treatment of 250 patients at both of the centers. Psychiatrically-trained medical officers were attached to each center to carry out treatment, as well as to supervise training of inexperienced medical officers assigned to the Clearing Stations. Segregation of psychiatric casualties

for treatment in separate installations has been found useful for the following reasons:

- a. They are most successfully treated in installations with as little "hospital atmosphere" as possible. This point of view encourages rapid recovery and obviates the impression on the part of the patient that he is suffering from serious or incurable illness.
- b. Avoids the possibility of "infecting" non-psychiatric casualties in Evacuation Hospitals.
- c. Relieves Evacuation Hospitals of the burden of specialized treatment.
- d. Maintains a uniform and efficient standard of treatment and effective control of established disposition.
- e. Provides a place to absorb the overflow of casualties from Division Clearing Stations when they are overcrowded or have to evacuate rapidly in order to move the station.

2. Evacuation Hospitals are instructed to send all cases with primary psychiatric diagnoses and erroneously admitted to their installation to Army Treatment Centers. Other cases in which it becomes evident that the disorder is primarily psychiatric are to be transferred to Centers as soon as a psychiatric diagnosis is established. Evacuation Hospitals are further advised to be alert in regard to the occurrence of psychosomatic syndromes among their medical patients. These cases are usually true psychiatric casualties, but often masquerade under organic diagnoses. They are often lost for combat and for further service, if subjected to unnecessarily thorough "organic" investigations and treatment, or too prolonged hospitalization. It has become evident that a large percentage of such cases, if of acute origin, can be salvaged for combat if they are treated as psychiatric and not "organic" casualties.

3. Therefore, it has been found advisable to clear such patients through Army Treatment Centers, once the absence of significant organic disease has been established in Evacuation Hospitals, in preference to sending them to General Hospitals for further investigation.

VENEREAL DISEASE CENTER.

Through experience gained during the North African, Sicilian, and Italian campaigns, plans were made for a Provisional Venereal Disease Hospital for operations in France. The operating personnel of this unit consisted of ninety-three (93) enlisted men and eight (8) officers of the 616th Medical Clearing

Co. plus one (1) iaboratorg officer and two (2) technicians from the 15th Medical Laboratory. Instructions were given these officers and men as to operational duties and policies to govern diagnosis and treatment. Necessary T/E equipment for a two-hundred-fifty (250) bed unit with a fifty (50) bed expansion was arranged for, and provisions made to divide the Center into two (2) operating units to provide coverage at any time the tactical situation demanded, or presented a transportation problem.

The VD Hospital entered France on D-Day, and was temporarily utilized to operate aid stations and act as Collecting and Clearing Company units. On 19 August, four (4) days following the landings, the Venereal Disease Center was set up and in operation. This type of centralized care of venereal disease cases has shown the following advantages over previous provisions of handling the venereal patient:

1. Quick return of soldiers to their units.
 - a. Made possible by "on the spot" diagnosis and treatment twenty-four (24) hours a day.
 - b. Evacuation of CRO cases directly to their units, or in the case of Division troops, to the Clearing Station and thence to Collecting Company vehicles for return to individual units.
2. (This policy was previously carried out with hospitalized cases until the Theater directed evacuation of this type of case through the Reinforcement Depot). A check of several divisions during November showed that following discharge from the VD Center, the average case was back with his unit in five (5) hours.
3. Forward location of the Center discourages deliberate attempts on the part of a few men to contract venereal disease as a means of returning to rear areas.
4. Relieves evacuation hospitals of providing bed space, nursing care, and laboratory facilities for this type case at the expense of battle casualties and seriously ill patients.
5. Under this plan it is possible to maintain accurate records of determination of cure.
 - a. As each patient is discharged from the Center an information slip is sent to his unit commander. The information contained shows the diagnosis and type of treatment received and specific instructions as to time and number of necessary laboratory determinations of cure.

- b. All units and installations, Seventh Army, having laboratory facilities send copies of negative and positive results to the VD Center where they are duly recorded as a part of the patient's history.
 - c. To limit loss of reports on cases reaching Comzone, base installations send copies of all venereal disease laboratory results completed on Seventh Army personnel in that area.
6. Develops a high degree of professional skill by limiting duties to a given specialty.
 7. Acts as an evaluation center for recurrent and complicated cases of venereal disease.
 8. Screening of cases results in only those requiring fever therapy, tertiary syphilitic treatment, or general surgical procedures leaving the Army area.
 9. Simplifies supervision of work by the Venereal Disease Consultant, Seventh Army, so that new improvements can be readily adapted.
 10. Instrumentation and irrigations are kept at a minimum.

EMPLOYMENT OF THE CONVALESCENT HOSPITAL IN ARMY AREA.

During the planning phase of Operation "Anvil" in Italy, it was decided that the 3000-bed convalescent hospital was too large and cumbersome for efficient operations, as a single unit of this type intended to operate in the Army area. Therefore, after careful consideration, this type hospital was divided into two (2) 1500-bed units operating under one (1) headquarters. All personnel was utilized since it was felt that the existing T/O & E provided only that number sufficient for operating one (1) active 1500-bed installation. Excess equipment was turned in to Medical Supply.

This hospital set up a 1500-bed unit on D f 30, and held the second unit in readiness. The performance of this experimental unit was smooth, efficient, and adequate for Army demands. However, the true worth of the arrangement was clearly demonstrated when it became necessary to move the hospital forward. At this time the unit had been in operation seventeen (17) days, and had a hospital census of over six hundred (600) patients. The second unit was moved to the new location, opened within twenty-four (24) hours, and at this time the rear unit was closed to receiving. Thus operation of the hospital was continuous. The rear unit joined the forward one in approximately twelve (12) days upon the completion of return to duty of all patients, this in itself a considerable saving in transportation, since it was not necessary to move the patients along with the hospital.

To date the hospital has made five (5) such "leap Frog" moves, with an average stay of twenty-eight (28) days at each site. On each occasion the rear unit has remained in place for approximately twelve (12) to fourteen (14) days and then joined the forward one.

The clinical services and headquarters have always moved with the advancing unit. It is also well to note that any part of or all of the closed unit may be used to augment the working installation. This has rarely been necessary since the build-up has usually been to about 1200 in ten (10) days. Present figures indicate an average daily census of about 1,000 patients, with an average daily admission of from 97 to 100, and disposition of from 92 to 100. Average patient days have been ten (10) to eleven (11).

A point of interest is that working on a 15-day evacuation policy 2,000 convalescent beds are adequate to support an army of from twelve (12) to sixteen (16) divisions actively engaged, since the "peak load" has only reached 1,400 on two occasions and has never held for more than from two (2) to four (4) days, when it has dropped to about 1,000 or even less.

That a convalescent hospital, acting solely in the capacity intended, is necessary in the Army area is readily apparent when the following figures are analyzed: A total of 16,138 patients have been admitted, of which 88% have returned to duty, 4% have been transferred to evacuation hospitals, and only 8% have been evacuated to base installations. Thus, during the period that this unit has been in operation the equivalent of more than one (1) division has been returned to duty, with a total loss of time per individual including stay in an evacuation hospital of three (3) weeks or less.

Further experimentation is being conducted with the purpose in mind of determining the advisability of setting up convalescent or "reconditioning" companies of 250-bed capacities, in the proportion of one (1) to each two (2) evacuation hospitals, each company being attached to one of the two evacuation hospitals it supports. Two (2) modes of operation are being tested; one in which the administration and clinical services of the evacuation hospital are utilized, and a second one in which the administration is left within the company.

Convalescent companies of this type effect a considerable saving in both manpower and equipment. Still another type of convalescent hospital is being considered in which there will be two (2) 500-bed units and a 1,000-bed "base unit". A more definite and complete report will be made on these "provisional units" when more conclusive data has been assembled.

For the sake of completeness and to again emphasize the need for the convalescent hospital, it should be stated that on

D f 5 a "Provisional Convalescent Hospital" was established. This installation was operated by a Clearing Platoon, augmented by seven (7) officers and fifty (50) enlisted men, the added personnel obtained from collecting companies. Additional equipment was minimal, consisting of tentage, cots, blankets, and extra mess equipment.

During the period of twenty-four (24) days, 1,568 patients were admitted, with a "peak load" of 731. Approximately 70% were returned to duty, with the average patient days being 6.75.

SURGICAL LAG.

Definition:

1. Unit Surgical Lag:

The time, expressed in hours required for a hospital to complete the surgery required on all moderately to severely wounded or injured casualties then present.

2. Average Surgical Lag:

The sum of the surgical lag of all hospitals in operation divided by the number of hospitals.

Determination of Surgical Lag:

It is an estimate made by the Chief of the Surgical Service of the hospital, or a competent assistant chosen by him, based upon physical examination of the casualties present and remaining unoperated. From practical experience it was found that an accurate estimate can be made by dividing the number of cases to be operated by 2.5 = Surgical Lag in hours.

Use of Surgical Lag:

Whether recognized or not, surgical lag determines when to stop sending casualties to a hospital. The forward ambulance regulating officers may stop the flow of patients to a unit because it has no more vacant beds, or because they have evacuated to the unit about fifty (50) to eighty (80) operative cases in six (6) hours. Actually the flow of casualties is stopped because surgery has been piling up in a particular hospital, and to send more cases to that unit would be detrimental to the patients. In Seventh Army this backlog of incomplete surgery is called "Surgical Lag". The regulating officers responsible for the distribution of patients from Division Clearing Stations to Army Evacuation Hospitals regulate the flow on information submitted every four (4) to six (6) hours by subordinates attached to the hospitals. The information submitted is essentially the number of vacant beds and the surgical lag.

With approximately two (2) years of active experience, the Army Surgical Consultant and the Chiefs of Surgical Services in Evacuation Hospitals assigned to Seventh Army, **express** the opinion that six (6) hours is the maximum period the average moderately to severely wounded patients should be held unoperated. Periods in excess of six (6) hours result in complications and retardation of recovery. The average surgical lag, therefore, must be held below six (6) hours if at all possible.

Surgical Lag vs. Vacant Beds:

The bed capacity of a military hospital is limited only by the ingenuity of its Commanding Officer. Vacant beds have no bearing on whether a patient will live or die *or* get back to his unit at an early date. The capacity of a human being, however, is limited to what he can do in twenty-four (24) hours of the day. What a collection of human beings cannot do in twenty-four (24) hours is, in a broad sense, Surgical Lag. Surgical Lag has a definite and direct bearing upon whether a patient is restored to duty **at** an early date, or even whether he **will** live or die. No better examples of the importance of Surgical Lag can be given than those arising from actual experience.

Surgical Lag vs. Battle Casualties Received:

The number of battle casualties being received is not a satisfactory basis upon which to estimate the number of hospitals required to support a stated number of divisions. There are too many variables in the type of casualty and the distance he is to be transported. To illustrate this fallacy note the following statistics taken from official records in this office:

<u>Date</u>	<u>No. of Evac Hosps open Both Corps</u>	<u>Total No. of Battle Casualties received from all sources 24 hour period</u>	<u>Average Surgical Lag at end of period</u>
23 Oct	7	244	4
24 Oct	7	203	6 1/2
25 Oct	7	281	5
26 Oct	7	192	2
27 Oct	7	169	2
28 Oct	7	310	2
29 Oct	6	218	1 1/2
30 Oct	6	260	3
31 Oct	6	301	5 1/2
1 Nov	6	192	4
2 Nov	6	166	4 1/2
3 Nov	6	219	6
4 Nov	6	250	7

From the above statistics it can be readily seen that the total number of casualties cannot possibly predict the number of Surgeons required at any time.

Increasing Capabilities of Hospitals:

In the above discussion it is only natural that the question, "why not increase the surgery that can be done in each unit by the addition of surgical teams", comes to mind. This has been considered and found impracticable in other than short temporary emergencies. To increase the amount of surgery that can be done is to start a vicious cycle, because it then becomes necessary to increase pre- and post-operative personnel and equipment, operative equipment and facilities.

SUMMARY

1. We already have sound methods of estimating battle casualties.
2. We have here presented a method of estimating requirements for skilled surgeons to take care of:
 - a. Non-transportables
 - b. All other operative battle casualties
3. The foregoing is based on four (4) months of combat in France, with skilled surgeons of long experience in the handling of battle injuries.

SOURCE: HD 319.1-2 ETO 7th Army, 1944

OFFICERS AND ENLISTED PERSONNEL OF THE
MEDICAL SECTION, SEVENTH ARMY

OFFICERS

Colonel	RUDOLPH, MYRON P.	MC	0-6430	Surgeon
Colonel	ROBINSON, ALBERT H.	MC	0-18924	Executive Officer
Colonel	RICH, JOSEPH	MC	0-20562	Operations Officer
Colonel	PEATFIELD, NORMAN E.	MC	0-21027	Hospitalization Officer
Colonel	BERRY, FRANK B.	MC	0-166083	Surgical Consultant
Colonel	GURLEY, WEBB B.	DC	0-400202	Dental Surgeon
Colonel	STEVENSON, DANIEL S.	VC	0-19696	Veterinarian
Lt Col	GOLDSON, ROBERT J.	MC	0-22778	Evacuation Officer
Lt Col	GOWEN, GUY H.	MC	0-238686	Medical Inspector
Lt Col	FLINN, JAMES E.	MC	0-464461	VD Control Officer
Lt Col	ALEXANDER, STEWART F.	MC	0-356481	Personnel Officer and CWS Consultant
"Lt Col	GUENTHER, AUGUSTUS J.	MAC	0-422216	Medical Supply Officer .
Major	FREW, EDITH F.	ANC	N-742165	Director of Nurses
Major	LUDWIG, ALFRED O.	MC	0-2073833	NP Consultant
Major	GOSS, HENRY C.	MC	0-1700702	Asst Hospitalization Officer
Major	RAULERSON, CHARLES	MAC	0-430373	administrative Officer
Captain	KRASNOFF, HARRY M.	MC	0-489953	Liaison Officer with Medical Section, First French Army
1st Lt	DUNSMOOR, FRANK L.	MAC	0-1534716	Asst Operations Officer
2d Lt	HOESCH, RAYMOND J.	MAC	0-1691587	Historian
2d Lt	SORENSEN, HARRY W.	MAC	0-1691578	Medical Records
WO(jg)	MORGAN, GLEN F.	USA	W-2130736	Medical Records

*Colonel Guenther is Commanding Officer of 7th Medical Depot Company, and is attached to Medical Section, Headquarters Seventh Army in dual capacity as Commanding Officer of Depot Company and Supply Officer on Army Surgeon's Staff.

ENLISTED MEN

M/Sgt	CAPPEL, WILLIAM F.	35459926	Chief Clerk, Administrative
T/Sgt	BRANDON, WILLIAM S.	35450865	Sick & Wounded Clerk
T/Sgt	CARDIN, JOSEPH A.	11044610	Statistics Clerk
T/Sgt	EPSTEIN, JOSEPH	32512620	Operations Clerk
S/Sgt	LOY, JOHN W.	6256256	Personnel & CWS Clerk
S/Sgt	MCLAUGHLIN, JAMES, M.	37379943	VD Control Clerk
S/Sgt	PETTY, JOE A.	35300955	Reports & Records Clerk
Tec 3	GUIMOND, ALFRED C.	16041659	Operations Clerk
Tec 3	MCCUNE, DONALD D.	37144510	Asst Chief Clerk, Administrative
Sgt	GELLER, ROBERT J.	35325043	Reports & Records Clerk

Sgt	MADDEN, PAUL W.	31370668	Administration Stenographer
Sgt	STARK, ROBERT	16154704	Medical Inspector's Clerk-Typist
Tec 4	ANDERSON, WILLIAM J.	37618367	Keports & Records Clerk
Tec 4	DULYA, GEORGE A.	33675071	File Clerk
Tec 4	JAFFE, HENRY	32316100	Reports & Records Clerk
Tec 4	MARSALA, FRANK J.	38194933	Dental Surgeon's Clerk-Typist
Tec 4	MCCONNELL, JOHN W.	33107656	Reports & Records Clerk
Tec 5	FERGUSON, DONALD M.	35034629	Reports & Records Typist
Tec 5	FORD, VALLE	36684830	Sick & Wounded Clerk
Tec 5	MEYERBACH, HELMUT	42034857	Interpreter, Clerk

AWARDS TO MEDICAL SECTION PERSONNEL

LEGION OF MERIT MEDAL

Colonel Myron P. Rudolph, MC
Colonel Joseph Rich, MC
Colonel Norman E. Peatfield, MC
Colonel Frank B. Berry, MC
Lt Col Robert J. Goldson, MC
2d Lt Harry W. Sorensen, MAC
M/Sgt William F. Cappel

BRONZE STAR MEDAL

Colonel Joseph Rich, MC
Colonel Norman E. Peatfield, MC
Lt Col Robert J. Goldson, MC
Major Charles Raulerson, MAC
WO(jg) Glen F. Morgan, USA
M/Sgt William F. Cappel
T/Sgt William S. Brandon
T/Sgt Joseph Epstein